
EXHIBIT P1

WILLISTOWN TOWNSHIP – ACT 537 PLAN DOCUMENTS
(2001 PLAN)

**ACT 537 PLAN UPDATE
FOR
WILLISTOWN TOWNSHIP**

**Prepared for:
Willistown Township
688 Sugartown Road
Malvern, Pa 19355**

NOVEMBER 2001

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I. Plan Summary

The purpose of this Plan is to provide an up to date document that will include all of the sewage facilities planning approved since 1990 and to address the existing and long-term wastewater treatment needs of Willistown Township. The most recently approved municipal Comprehensive Plan, states that the objectives for sewage disposal are to "...co-ordinate development opportunities with existing sewage facilities. Specifically, provide for public water and sewage facilities where growth is appropriate and restrict the extension of public facilities in those areas identified for preservation. Coordinate land use planning with sewage facilities ('Act 537') planning."¹ The intention of this plan is to harmonize with the Comprehensive Plan and identify areas of the township where public sewer currently exists; areas of need for future public service and areas intended to remain served by on-site sewage disposal systems.

Exhibit 4 identifies the existing public sewer facilities and the proposed sewage disposal plans for the township. The northern portion of the township is served with public sewer with conveyance to and treatment at the Valley Forge Sewage Treatment Plant. The large parcels concentrated throughout the center of the township are currently served by on-site sewage disposal systems and proposed to remain onsite for the foreseeable future. The area referred to as Study Area "A", Northwest Quadrant, currently has onsite sewage disposal systems; however, this plan will discuss providing public sewer for the area with conveyance to and treatment at the Ridley Creek Sewage Treatment Plant in East Goshen Township. The southern portion of the township is primarily served with public sewer at the Plumsock Sewage Treatment Plant, Penns Preserve Spray Irrigation System and the Willistown Woods Sewage Treatment Plant (formerly known as Chesterdale).

This plan will recommend that public sewer be provided for Study Area "A" - Northwest Quadrant and the area labeled "East Central II", both identified on Exhibit 4, and that the area in the central portion of the township continue to be served by on-site sewage disposal systems. A Sewage Management Program and ordinance to be implemented by the Township within the next five years will regulate the proper operation and maintenance of the on-site systems.

This plan will recommend that public sewer be provided for the Northwest Quadrant and East Central II (Laurel Road and Jaffrey Road) areas of the township within the next five years. The majority of the homes in both the Northwest Quadrant and East Central II areas are in the 30-50 year old range with a small number of new homes and a few over 100 years old. The need for public sewers in these areas has been identified in several ways: the Chester County Health Department has stated that

¹ Willistown Township Comprehensive Plan, Guidelines for Growth, adopted March 24, 1997, Section 2.3.8, page 13

more than the normal number of repair/replacement permits have been issued in portions of the Study Areas, citizen inquiry, and the results of a mail survey conducted by the township in late summer 2000.

The survey was mailed to 539 property owners. A total of 368 were returned – 68%. The tabulated results of the returned surveys indicate that there are problems with 48 on-site sewage disposal systems, 10 with contaminated wells and 38 respondents who specifically stated that they want and/or need public sewers. The survey also revealed that there have been 33 repairs or replacements to on-site sewage disposal systems in the last 15 years. Of those replacements, five required sand mounds because of the soil conditions. A complete copy of the survey results are included with this plan as Exhibit 5a and b.

Northwest Quadrant

The Northwest Quadrant, shown on Exhibit 9a, includes the Christ Memorial Lutheran Church (corner of Line Road and Paoli Pike), the Bryn Mawr Rehab facility on Paoli Pike and surrounding residential dwellings. Six alternatives will be evaluated for this area: 1) Do nothing other than monitor the on-site sewage disposal systems by means of a Sewage Management Program; 2) Construct a gravity sewer system to serve the entire quadrant with conveyance to the Valley Forge Sewage Treatment Plant; 3) Construct a gravity sewer system to serve the entire quadrant with conveyance to Ridley Creek Sewage Treatment Plant in East Goshen Township; 4) Construct a pressure sewer system with conveyance to Ridley Creek Sewage Treatment Plant; 5) Construct a sewer system to serve only a portion of the quadrant most in need; and 6) Construct a combination gravity and pressure sewer system with conveyance to the Ridley Creek Sewage Treatment Plant. The alternative of choice for the northwest quadrant will be number 6: construct a combination pressure and gravity system to convey the effluent to the Ridley Creek Sewage Treatment Plant in East Goshen Township.

Implementation of this project will require that Willistown Township and East Goshen Municipal Authority will need to reach an agreement for the purchase of capacity and the ongoing operations and treatment costs. At the present time, there are three Willistown properties connected to the East Goshen system. An inter-municipal agreement is already in place for those properties. It is possible that agreement can be expanded to cover the Northwest Quadrant. Willistown has approached the East Goshen Municipal Authority with regard to available capacity in the Ridley Creek Sewage Treatment Plant when/if it is expanded. East Goshen has only responded verbally that they are interested and will have some financial information in a few months. One possibility for financing is for Willistown and East Goshen to obtain a combined bond to cover the capacity cost and plant expansion. If capacity is not available for the entire quadrant, the area will need to be segregated to those portions with the greatest need: Christ Memorial Lutheran Church, Fox Ridge Farm and the Stonehenge community.

East Central – Phase II

The East Central Phase II area includes Laurel Road, Hilldale Road, and portions of Warren Avenue, Jaffrey Road and Sugar Brook Lane. The area is shown on Exhibit 15a. Capacity for this project has been allocated at the Valley Forge Sewage Treatment Plant.

Four alternatives have been evaluated for the East Central II (Laurel and Jaffrey Roads) area: 1) do nothing and monitor the on-site sewage disposal systems by means of a Sewage Management Program; 2) construct a pressure system with conveyance to the existing system that is part of the East Central Project with treatment at the Valley Forge Sewage Treatment Plant; 3) construct the pressure system in two phases; and 4) construct a gravity system with conveyance to the existing system that is part of the East Central Project with treatment at the Valley Forge Sewage Treatment Plant. The recommended alternative is number 2: construction of a pressure system with conveyance to the East Central lines and treatment at Valley Forge Sewage Treatment Plant.

Implementation of this project will require municipal financing through a bond issue or general funds. If the Township chooses to proceed with this project immediately, the design could be completed upon approval of this plan and application made for a construction permit.

II. Previous Wastewater Planning

The last township wide Sewage Facilities Plan was completed in the 1990 and last revised in February 1991 with conditional approval granted by the Department on September 16, 1991. The areas of concern to the Department at that time were the Chesterdale Sewage Treatment Plant and the Deerfield Knoll development.

On July 29, 1999 the Department approved a Special Study for the Chesterdale Service Area². That Special Study recommended that the Department approve a transfer of the plant from private ownership to Little Washington Wastewater Company, a subsidiary of Philadelphia Suburban Water Company. The transfer has been made and the plant brought into compliance with the permit. Expansion from 0.120 MGD to 0.175 MGD is in progress. Further discussion of this Study Area can be found in the section on Private and Community Systems.

Deerfield Knoll – The large volume subsurface system serves the 119 single-family dwellings in the community and is owned and operated by the Deerfield Knoll Homeowner's Association. WQM Permit #1586408 was originally issued to the builder and transferred to the Homeowner's Association on February 16, 1988.

² APS Id.37884, AUTH Id 39346

This community system represented the other area of concern in the Department's 1991 conditional Act 537 approval. This plan proposes to address the Department's concerns by requiring regular reporting as part of the proposed Sewage Management Ordinance to be adopted by the township. Further discussion of this Study Area can be found in the section on Private and Community Systems.

The Acres Project – 1993 – A pressure sewer system serving 113 single-family dwellings. The township maintains the pumps using the proceeds from a fee included in the quarterly sewer rent paid by the homeowner

Greenbriar Lane – 1993 – A private pressure sewer system serving 11 single family dwellings. The township maintains the pumps with the proceeds from a fee included in the quarterly sewer rent paid by the homeowner.

East Central Project – 1998-1999 – Pressure system serving 137 single-family dwellings, including the project area known as Brookside. The pumps are maintained by the township with a fee included in the quarterly sewer rent paid by the homeowner.

Callery Way –1999 – Pressure sewer system serving one existing single-family dwelling and 15 new dwellings. The township maintains the pumps with a fee included in the quarterly sewer rent paid by the homeowner.

Reeves Way – 1999 – Pressure sewer system serving three single-family dwellings. The township maintains the pumps with a fee included in the quarterly sewer rent paid by the homeowner. Construction of this project is complete.

Dovecote – 1998 - Current – Gravity sewer system serving 23 single-family dwellings. At the end of 1999, seven homes had been completed and occupied.

Private and Community Systems

1. Willistown Woods Wastewater Treatment Plant (formerly named Chesterdale Sewer Plant)

The plant serves the communities of Willistown Woods, Worrington Commons and Willistown Knoll and Huntingdon Green Apartments in Westtown Township. The location of the plant and the service area are shown on Exhibit 4.

The Department's 1991 approval of the township wide Act 537 Plan was conditional in part due to concerns about the old Chesterdale Sewage Treatment Plant. The plant was privately owned and in disrepair and non-compliance with the NPDES permit requirements, unable to treat the effluent within the parameters of the permit. Notices of Violations from the Department to the owner went unheeded.

In 1998, Little Washington Wastewater Company³ expressed interest in purchasing the plant. An Act 537 Plan Special Study was completed and approved by the Department on July 29, 1999 (APS Id. 37884, AUTH Id.39346) for transfer of ownership of the Chesterdale Sewer Plant to Little Washington Wastewater Company as well as expanding the service area to include the existing homes in the vicinity of State Route 926 between the western township line and State Route 3 and extending north to the boundary with East Goshen Township. The expanded Study Area will serve an additional 221 existing and future EDUs.

In addition to the transfer of ownership, the Plan provided for the construction and expansion of the new Willistown Woods WWTP to replace the existing facility with the new facilities expanded beyond the current design capacity of 120,000 gpd to 175,000 gpd. Additional planning, via the planning module process, must be done before new connections from existing residential dwellings can be accomplished.

Pulte Homes, a residential homebuilder, has entered an agreement for the purchase of the tract of land across West Chester Pike (State Route 3) from the Willistown Woods WWTP. The property is part of the Chesterdale Service Area, however the allocated capacity for the land is less than the proposed number of dwellings will require. The township is requiring the developer to show a suitable disposal area to handle the excess flows on the property or on another property.

The requirement for a suitable disposal area will be made of all developers who present plans for this Service Area.

2. Deerfield Knoll – WQM Permit #1586408

This community of 119 single-family dwellings is served by a large volume sub-surface disposal system permitted under WQM #1586408. The Homeowner's Association owns and operates the system. Periodic reports to the Department and the township on the operations and maintenance of the system are not required under this type of permit. This plan recommends that copies of the operator's reports be submitted to the township as a requirement of the proposed Sewage Management Plan the township will adopt and implement.

The HOA has recently determined that it does not want to be in the "sewage business" any longer and has initiated discussions with Little Washington Wastewater Company for the purchase of the sewage disposal system. The two groups are investigating and considering several alternatives:

- 1) Little Washington purchases the sewage disposal system and leaves the plant and beds as they are now.
- 2) Little Washington purchases the sewage disposal system, installs pipes to

³ A wholly owned subsidiary of Philadelphia Suburban Water Company

- convey the effluent to the Willistown Woods WWTP for treatment, and returns the treated effluent to Deerfield Knoll sewage disposal beds. The Deerfield Knoll treatment unit would be abandoned and removed.
- 3) Little Washington purchases the sewage disposal system and abandons both the plant and the disposal beds. Effluent would be conveyed to the Willistown Woods WWTP for treatment and stream discharge.
 - 4) Little Washington purchases the sewage disposal system and abandons the plant and the disposal beds. Effluent would be conveyed to the Willistown Woods WWTP with land disposal at another location.

This plan does not intend to make a recommendation on any of these alternatives under consideration. Should discussions between the Deerfield Knoll HOA and Little Washington Wastewater Company lead to a purchase agreement, a Special Study will be completed with an analysis of all alternatives.

3. Plumsock LVOLDS – WQM Permit #1592402

The Plumsock LVOLDS is a sequencing batch reactor plant permitted under WQM Permit #1592402, issued on May 12, 1995, with a permitted discharge of 10,000 GPD for the Plumsock development only. In 1999 the Department approved an Act 537 Plan Special Study increasing the size of the service area and projected flow from 10,000 GPD to 30,000 GPD to service the Plumsock development, a proposed assisted living facility (corner of Route 3 and Plumsock Road) and 19 adjacent existing homes and for transfer of ownership of the Plumsock Sewer Plant from the Plumsock Homeowner's Association to Little Washington Wastewater Company. The transfer of the facility to Little Washington Wastewater Company took place in October-2000.

4. Penns Preserve System – WQM Permit # 1596405

This spray irrigation system is designed to handle 0.08 MGD with completion in two phases. Phase I consists of 45,000 GPD allocated to 222 townhouses in Penns Preserve (109) and Willistown Chase (93). The system is owned by the Township and operated by Yerkes Associates, Inc on behalf of the township. As of June-2000, a total of 177 units are on line leaving a balance of 45 to be constructed as part of Phase I. The balance of the approved capacity (35,000 GPD) is intended to be used for proposed office buildings. The additional spray fields needed for Phase II have not yet been constructed.

5. Ivy Hill (Cratin Lane) – COLDS

This plant serves the sanitary sewage needs of a single-family community of 15 homes. The plant is owned and operated by the Ivy Lane Homeowner's Association under Chester County Health Department Permit #E21345 issued on

September 19, 1986.

III. Physical and Demographic Analysis

GEOLOGY, TOPOGRAPHY, AND DRAINAGE

Geology

Three major geologic formations underlie Willistown Township. The Wissahickon formation underlies the northern 25 percent of the Township. Just south of the Wissahickon is a narrow band of Serpentine rock. Gneiss underlies the southern 66 percent of the Township. Both Wissahickon and Gneissic rock have moderate groundwater yields with generally good chemical quality. Serpentine has moderate well yields with water that is characteristically hard and alkaline.

Topography

Willistown Township lies within the Piedmont Province of the Appalachian Highlands. The topography is generally undulating. Slopes of greater than 15 percent occur principally along stream courses. The majority of the municipality is contained in the Ridley and Crum Creek watersheds, both of which drain in a southeasterly direction to the Delaware River. The headwaters of Crum Creek are situated principally in Willistown Township. This creek supplies the Geist Reservoir in Delaware County that is operated by the Philadelphia Suburban Water Company. The northeastern portion of the municipality is contained in the Valley Creek Watershed that drains to the Schuylkill River. Exhibit 7 is a map of the steep slopes, flood plains, wetlands, hydric soils, and surface water of Willistown Township from the Township Comprehensive Plan (Map 3 Environmental Constraints).

Drainage Areas

Willistown Township is comprised of three natural drainage areas. The major basins are the Crum, Ridley and Valley Creek watersheds. The Crum and Ridley Creek Watersheds are part of the Delaware River sub-basin. Drainage from these watersheds flows in a southeastern direction through Delaware County to the Delaware River. The Crum and Ridley Creek Watersheds account for approximately 11,450 acres, or about 98% of the land area in the Township. The Valley Creek Watershed drains approximately 275 acres in the extreme northeastern portion of the municipality. Drainage from this watershed flows in a northeastern direction to the Schuylkill River.

Willistown Township straddles the ridges that divide the Crum and Ridley Creek watersheds and the Crum and Valley Creek watersheds. Since the municipality contains headwaters of the Valley Creek and Crum Creek, the potential impact on water supply and quality by activities outside the municipal boundaries is minimal.

Soils in the Planning Areas

Table 1 lists the soil types found in the Study Areas that are generally unsuitable or marginal for on-site sewage disposal systems. Building Group categories are labeled "N" indicating not suitable and "M" indicating marginally suitable.

Exhibit 6 illustrates the locations of these unsuitable and marginal soil types. The areas shown in white are generally suitable for on-site sewage disposal systems.

Willistown Township
Chester County
Act 537 Plan Update

TABLE 1⁴

MAP SYMBOL	NAME	DESCRIPTION	% SLOPE	BLDG GROUP	SUITABLE FOR ON-SITE
AgA	ALDINO	SILT LOAM	0-3	12	N
AgB2	ALDINO	SILT LOAM MODERATELY ERODED	3-8	12	N
BrB2	BRANDYWINE	SILT LOAM MODERATELY ERODED	8-15	7	M
BrC	BRANDYWINE	SILT LOAM MODERATELY ERODED	8-15	8	M
BrC2	BRANDYWINE	SILT LOAM MODERATELY ERODED	8-15	8	M
BrC3	BRANDYWINE	SILT LOAM SEVERELY ERODED	8-15	8	M
BrD	BRANDYWINE	SILT LOAM SEVERELY ERODED	15-25	8	M
BrD2	BRANDYWINE	SILT LOAM MODERATELY ERODED	15-25	8	M
BrD3	BRANDYWINE	SILT LOAM SEVERELY ERODED	15-25	9	N
BrE	BRANDYWINE	SILT LOAM SEVERELY ERODED	25-40	12	N
BsD	BRANDYWINE	VERY STONY LOAM	8-25	12	N
BsF	BRANDYWINE	VERY STONY LOAM	25-50	12	N
CaA	CALVERT	SILT LOAM	0-3	12	N
CaB	CALVERT	SILT LOAM	3-8	12	N
CaB2	CALVERT	SILT LOAM MODERATELY ERODED	3-8	12	N
CH	CHEWLACA	SILT LOAM		13	N
CkB2	CHROME	SILT LOAM MODERATELY ERODED	3-8	7	M
CkC2	CHROME	SILT LOAM MODERATELY ERODED	8-15	8	M
CkC3	CHROME	SILT LOAM SEVERELY ERODED	8-15	8	M
CkD3	CHROME	SILT LOAM SEVERELY ERODED	15-25	8	M
CoA	CONWINGO	SILT LOAM	0-3	10	N
CoB2	CONWINGO	SILT LOAM MODERATELY ERODED	3-8	10	N
GeE	GLENELG	CHANNERY SILT LOAM	25-35	9	N
GmE	GLENELG	CHANNERY SILT LOAM - VERY STONY	25-35	9	N
GnA	GLENVILLE	CHANNERY SILT LOAM	0-3	10	N
GnB	GLENVILLE	CHANNERY SILT LOAM	3-8	10	N
GnB2	GLENVILLE	CHANNERY SILT LOAM- MODERATELY ERODED	3-8	10	N
GsB	GLENVILLE	CHANNERY SILT LOAM - VERY STONY	0-8	10	N
Gu	GUTHRIE	SILT LOAM		12	N
MhE	MANOR LOAM	MANOR AND CHANNERY LOAM	25-35	9	N
MhE3	MANOR LOAM	MANOR LOAM - SEVERELY ERODED	25-35	9	N
MkF	MANOR LOAM	MANOR SOILS	35-60	9	N
MmF	MANOR LOAM	MANOR - VERY STONY LOAM	25-60	9	N
NsF	NESHAMINY	VERY STONY SILT LOAM	25-45	9	N
WaB2	WATCHUNG	SILT LOAM		12	N
We	WEHADKEE	SILT LOAM		13	N
WoA	WORSHAM	SILT LOAM		12	N
WoB	WORSHAM	SILT LOAM	3-8	12	N
WoB2	WORSHAM	SILT LOAM	3-8	12	N
WsB	WORSHAM	VERY STONY SILT LOAM	0-8	12	N

⁴ Data taken from Soil Survey for Chester and Delaware County, U.S. Department of Agriculture in cooperation with Pennsylvania State University and the Pennsylvania Department of Agriculture, issued May-1963

Demographic Analysis

Willistown Township covers an area of 18.5 square miles with a population of approximately 10,000.⁵ The township surrounds Malvern Borough on three sides, with portions of the Chester County townships of East Whiteland, Easttown, Tredyffrin, Westtown, East Goshen, and Newtown and Edgmont townships in Delaware County on the remaining borders. A location map is included as Exhibit 1.

The township has a population density of 515.4 persons per square mile that places it in a category of "Rural Suburban".⁶ However, because the township contains considerable development in the northern half and substantially less in the southern half, it is probably more accurate to categorize the northern half as Suburban and the southern half as Rural.

Regional and local planning agencies expect population growth over the next twenty years to be minimal.⁷

IV. Existing Sewage Facilities

Valley Forge System

In 1971, Willistown Township formed a municipal authority for the purpose of constructing sewer lines to serve a portion of Willistown Township and to finance their portion of an interceptor to convey the effluent to a sewage treatment plant. The township then entered into an agreement with Valley Forge Sewer Authority for the purchase of 1.064 MGD to serve the immediate and future needs of certain portions of the township. There is no historical data available that delineates exactly what the immediate sewer needs of the township were; however, the project generally served the area east and south of the Borough of Malvern. The area consists of residential and commercial uses. Two of the largest commercial/industrial customers include Paoli Hospital and Villa Maria Academy located along US Route 30.

The Willistown project consisted of the installation of approximately 85,500 linear feet of 8-10 inch diameter collection system, 11,430 linear feet of 8-10 inch diameter interceptor, the Devon Road East Pump Station with approximately 720 linear feet of 4 inch diameter force main, the Devon Road West Pump Station with approximately 1,555 linear feet of 8 inch diameter force main and the Pond Lane Pump Station with approximately 5,950 linear feet of 14 inch force main to collect and convey wastewater from existing communities to proposed interceptors and pumping stations to be built by the Tredyffrin Township Municipal Authority to the proposed Valley Forge Sewage

⁵ 2001 Township Directory of Chester County, page 67

⁶ Chester County Open Space and Recreation Study, Chester County Planning Commission, 1982 classifies "Rural Suburban" as an area with density between 375 and 880 persons per square mile.

⁷ Willistown Comprehensive Plan, pages 32 and 33

Treatment Plant for treatment.⁸

The average flow reported in the 1999 Annual Wasteload Facilities Report was 0.895 MGD from 1748 connections. The Valley Forge Sewage Treatment Plant is currently being re-rated and according to a May 16, 2000 memorandum from Valley Forge Sewer Authority, Willistown has used 0.975 MGD of their reserve capacity, leaving a balance of 0.089 MGD or 322 EDUs at 275 gpd/EDU. This balance is not sufficient to meet the long-term needs of the township that will be identified in this plan.

Willistown Woods Wastewater Treatment Plant (formerly Chesterdale)

The Willistown Woods WWTP is located in the southeastern portion of the township. The plant is owned and operated by Little Washington Wastewater Company under NPDES Permit PA 0056075. The permit issued limits the discharge to 0.175 MGD. The plant currently serves the communities of Willistown Woods, Willistown Knoll, Worrington Commons, and Huntingdon Green Apartments in Westtown Township.

Deerfield Knoll

This large volume subsurface system serves 119 single-family dwellings. The system is owned and operated by the Deerfield Knoll Homeowner's Association under WQM Permit #1586408.

Ivy Hill (Cratin Lane) – COLDS

This plant serves the sanitary sewage needs of a single-family community of 15 homes. The plant is owned and operated by the Ivy Lane Homeowner's Association under Chester County Health Department Permit #E21345 issued on September 19, 1986.

Penns Preserve

WQM Permit # 1596405 -This spray irrigation system is designed to handle 0.08 MGD with completion in two phases. Phase I consists of 45,000 GPD allocated to 222 townhouses in Penns Preserve (109) and Willistown Chase (93). The system is owned by the Township and operated by Yerkes Associates, Inc on behalf of the township. As of June-2000, a total of 177 units are on line leaving a balance of 45 to be constructed as part of Phase I. The balance of the approved capacity (35,000 GPD) is intended to be used for proposed office buildings. The additional spray fields needed for Phase II have not yet been constructed.

⁸ Information taken from the project description in the Final EPA Audit for the period of July 6, 1973 to November 19, 1980 – EPA Construction Grant #C-420669-01.

Plumsock LVOLDS

This large volume community on-site sewage disposal plant and pump station are located in the Plumsock community on Plumsock Road in the southeastern portion of the township. The system operates under WQM Permit #1592402 issued in May-1994.

On-Site Sewage Systems

During the Summer 2000 Willistown Township sent a survey to 539 property owners within the Northwest Study Area and the East Central II Study Area. Three hundred sixty-eight (368) responses were returned. The survey is included as Exhibit 5c. The survey did not ask whether public sewers were wanted, however thirty-eight (38) made a specific point of writing that they did want/need public sewers and six (6) wrote that they did not want/need public sewers. More importantly, the results indicated the following:

System Works Fine	138
Problems with existing system	48
Well contaminated	10
Well problems but indication that septic "works fine"	11
Recent (15 years or less) repairs/replacements	33 (homes ranging from 200 years to 20 years in age)
Replacements requiring sand mounds	5

V. Future Growth and Development

The township's zoning map was updated in 1999. It is the township's intent to keep the central part of the municipality as primarily rural with large lots as illustrated on Exhibit 2. Commercial and Industrial uses will be restricted to the highway corridors of State Routes 3 (West Chester Pike) and 30 (Lancaster Pike).

The Route 30 corridor is essentially built out. Since the last Act 537 Plan, an apartment complex and assisted living facility have been constructed in this area leaving no substantial vacant land for development.

The Route 3 corridor has several parcels that are currently under development or in the preliminary planning stage. In the western end of the township, a 111-unit townhouse development within the Chesterdale Study Area is under construction.

Pulte Homes, the owner of a parcel on the north side of State Route 3 (West Chester Pike), has had discussions with the township regarding the construction of a townhouse development as well. Capacity for this parcel was included in the Chesterdale Study Area. The plan proposes the construction of a pump station that

will pump to the station in the Willistown Woods development. The property is part of the Chesterdale Service Area, however the allocated capacity for the land is less than the proposed number of dwellings will require. The township will require the developer to show a suitable disposal area to handle the excess flows either on the property or on another property. Back-up testing of the disposal area will be a requirement and will need to be included with the planning module submission. The requirement for a suitable disposal area will be made of all developers who present plans for this Service Area.

The township's Consulting Engineer completed a vacant parcel analysis in 1996. This analysis is included as Exhibit 8. The analysis concluded that there were 336 EDUs than could eventually be developed in the township. That conclusion did not necessarily mean that all of those future equivalent dwelling units would be connected to public sewer.

VI. Study Areas and Alternatives

Study Area A - Northwest Quadrant

The northwest quadrant of the township is identified as Study Area "A" on Exhibit 4. This Plan proposes construction of public sewers for the area in the immediate future. The proposed project area is bounded by Sugartown Road on the east, Line Road on the west, King Road on the north and the southern border of the Bryn Mawr Rehabilitation Center property.

For planning purposes, the area consists of a total of 704 EDUS. The EDUs can be broken down as follows:

145 EDUS	Bryn Mawr Rehailitation Center
4 EDUs	Christ Memorial Lutheran Church
22 EDUS	Fox Ridge Farm
429 EDUs	Existing single family dwellings
104 EDUs	Future land development in the study area

It is estimated that a total of 200,000 gallons will be needed to serve the existing and future properties. When calculating the estimated capacity needs, a wastewater rating of 275 GPD/EDU has been used for the single-family dwellings. One hundred forty-five (45) EDUs have been assigned to the Bryn Mawr Rehabilitation Center and four (4) EDUs to the church. These allocations are based on numbers previously included in the East Goshen Special Study to expand the Ridley Creek Sewage Treatment Plant.

Homes in the Stonehenge development have experienced problems in recent years. Because of failed on-site sewage disposal systems, the township gave approval for two homes along Sugartown Road to tie into the public sewer lines in the Brampton Chase community on the east side of Sugartown Road. Staff at the Chester County

Health Department have indicated that there has been a higher than normal number of repair/replacement permits issued for homes along Applewood Road, Clover Lane, Pickwick Lane, Friarsheel Lane, Stonehenge Lane and Salisbury Lane. The Chester County Health Department records show that between January 1997 and May 2000 there were permits issued for 19 replacement systems or 4.5% of the homes in the area. Based on this evidence, the age of the homes and numerous requests for public sewer by the residents, the township believes it is necessary to plan for a public sewer extension to serve the area in the immediate future.

In recent years the Fox Ridge Farm Homeowner's Association (entrance on Paoli Pike), Christ Memorial Lutheran Church (corner of Paoli Pike and Line Road), and Bryn Mawr Rehabilitation Center (Paoli Pike) have made requests for capacity in the Ridley Creek Sewage Treatment Plant in East Goshen Township. At the time the requests were made, East Goshen Municipal Authority denied all of the requests due to insufficient available capacity in the Ridley Creek Plant. Since that time, the Ridley Creek Sewage Treatment Plant has received planning approval from the Department to expand the discharge limits of the Ridley Creek Sewage Treatment Plant from 0.400 MGD to 0.750 MGD. Recent letters were sent to representatives of these facilities. Written responses were received from Fox Ridge Farm Homeowner's Association and the Christ Memorial Lutheran Church indicating a continued interest in connecting to a public sewer system.⁹ The Bryn Mawr Rehabilitation Center has been in contact with East Goshen Township indicating their continued interest in connecting to the public sewer system.

The Fox Ridge Farm development has an existing pump station and community on-site system that serves the 27 homes in the community. As recently as August 2000 the homeowner's association indicated interest in connecting to the East Goshen Municipal Authority public sewer system and contacted the East Goshen Authority. This August 21, 2000 letter is included as Exhibit 10. Fox Ridge development homeowners who responded to the township's survey of Summer 2000 indicated that the system often smells, has to have frequent repairs, and generally does not appear to operate properly. One respondent commented that there are sufficient funds in the HOA account to pay for a public sewer connection. Capacity needs are estimated to be 7,425 GPD using a wastewater rating of 225 GPD/EDU.

Christ Memorial Lutheran Church is located at the corner of Line Road and Paoli Pike. In 1993, the church directors asked East Goshen Municipal Authority if capacity was available in the Ridley Creek Treatment Plant since they were having problems with the on-site sewage disposal system. When told capacity was not available, the church made a \$25,000 repair to the on-site sewage disposal system in 1994; however, representatives of the church are still expressing strong interest in a public sewer connection as soon as it is available since the on-site system is still not working properly. The church uses two systems: one is an aerobic system that partially

⁹ Exhibits 9 and 10

discharges to a sand mound. The tank has a crack in it, causing a high water alarm during heavy rain. Staff working in the church building do not or cannot understand the importance of the alarm and either ignore it or shut it off without any further action, resulting in the pump motor burning out. The Building and Grounds personnel have to replace the pump about every six months at a cost of \$600 each time. The second system pumps to a backfield. Obviously, better education about the system is needed if a public sewer connection is not possible. This would be handled through the Sewage Management Program. Capacity needs for the church are estimated at 1,000 GPD or four (4) EDUs.

Bryn Mawr Rehab management has sent inquiries to East Goshen Municipal Authority regarding available capacity that would allow them to abandon the stream discharge sewage treatment plant serving the rehabilitation facility. Capacity needs for the facility have been estimated at 40,000 GPD or 145 EDUs. The engineer representing the facility has recently contacted the township's consulting engineer by telephone to ask the details of how such a connection can be made. East Goshen included the capacity needs for this and the other two areas in the allocations approved with the March 1999 Act 537 Plan.

Two individual homeowners on Line and Monument Roads also requested and were denied capacity by East Goshen Municipal Authority.

Six alternatives have been evaluated for this study area: 1) Do nothing; 2) Construct a gravity sewer system to serve the entire quadrant with conveyance to the Valley Forge Sewage Treatment Plant; 3) Construct a gravity sewer system to serve the entire quadrant with conveyance to Ridley Creek Sewage Treatment Plant in East Goshen Township; 4) Construct a pressure sewer system with conveyance to Ridley Creek Sewage Treatment Plant; 5) Construct a sewer system to serve only a portion of the quadrant most in need; and 6) Construct a combination gravity and pressure sewer system with conveyance to the Ridley Creek Sewage Treatment Plant. The recommended alternative for the study area is number 6. A Special Study will be submitted to the Department upon approval of this plan to address the details of construction.

For the purposes of estimating construction and project costs, the alternatives were evaluated based on installing the sewer system immediately in the portion of the quadrant in the greatest need. The rest of the quadrant would be sewerred based on need or the expressed desire of the property owners. Homes fronting newly sewerred streets would be required to hook-up to the new sewer system, even if their on-site system was still functioning satisfactorily. The number of EDUs that will be used for these estimations is 510.

Alternative 1 – The alternative to do nothing was dismissed based on the evidence of need provided by the Chester County Health Department and the results of the Summer-2000 survey mailed to the residents of the study area. A copy of the survey

and the results are included in this Plan as Exhibits 5b and c.

Alternative 2 - Construct a gravity sewer system to serve the entire area with conveyance to the Valley Forge Sewage Treatment Plant. This alternative was dismissed due to lack of capacity at the Valley Forge Sewage Treatment Plant. The township completed an extensive infiltration and inflow study in 1999 and has now embarked on a four-year replacement and rehabilitation program for existing sewer lines that convey effluent to VFSTP. The estimates at this time are that up to 195,000 GPD will be recovered when the four-year program is completed and that the recovered capacity will become available to the township or that the township will be able to offer the capacity to VFSA for purchase. In any case, that amount of capacity is not sufficient to cover the entire needs of the northwest quadrant.

Alternative 3 - Construct a gravity sewer system to serve the entire area with conveyance to the Ridley Creek Sewage Treatment Plant in East Goshen Township. This alternative will require the installation of approximately 41,150 LF of eight (8) inch gravity sewer, 76 manholes, and three (3) pump stations at an estimated project cost of \$4,599,350. The projections indicate that the cost per existing EDU required to hook-up will be \$12,145, including the capacity fee. An agreement between East Goshen and Willistown for the conveyance and treatment of the effluent would need to be entered into. This alternative was dismissed from further consideration due to the high cost of the project when compared with pressure sewers or a combination of gravity and pressure sewers.

Alternative 4 - Construct a pressure sewer system with conveyance to Ridley Creek Sewage Treatment Plant. Construction costs for the pressure system are less than for the gravity system. However, certain portions of the study area are feasible for gravity collection, in both topography and existing systems that will tap into the sewer system, so this alternative was dismissed from further evaluation.

Alternative 5 - Construct a sewer system to serve only a portion of the quadrant most in need. This alternative was dismissed from further evaluation due to the need evidenced in all corners of the area.

Alternative 6 - Construct a combination of gravity and pressure sewers to serve the study area with conveyance to the Ridley Creek Sewage Treatment Plant in East Goshen Township. This alternative is the recommended one. A gravity line is proposed along Paoli Pike to serve the church, Fox Ridge Farm development and Bryn Mawr Rehab facility. A pressure sewer would be installed in the remainder of the area with connection to the gravity line. An agreement between East Goshen and Willistown for the conveyance and treatment of the effluent would need to be entered into.

A preliminary proposed route for a gravity and pressure sewer conveyance to the Ridley Creek Sewage Treatment Plant is shown on Exhibit 9b. The Exhibit does not

show the referenced pump stations as the location of these, if needed, will be determined after the survey work is completed. The connection to the East Goshen line would be at an existing manhole on Line Road. The existing lines are large enough to accept the proposed flow from Willistown Township.

Willistown Township has sent preliminary correspondence to East Goshen Municipal Authority requesting information on the cost and availability of capacity in an expanded treatment facility. The Authority is interested in pursuing the discussions with Willistown Township; however, they have verbally indicated that they will not be in a position to respond fully for about six months, until they have had an opportunity to determine whether capacity will be available in an expanded RCSTP.

Recommended Alternative

The recommended alternative is number 6 in which pressure sewers that tie into gravity sewer lines along Paoli Pike would be constructed to serve the entire area, conveying the effluent to the Ridley Creek Sewage Treatment Plant in East Goshen Township for treatment. In this alternative, the project costs and capacity fee would be an estimated \$9,155 per EDU in addition to the costs to make the physical connection from the house to the lateral stub, the purchase and installation of a grinder pump, and abandoning the existing on-site sewage disposal system.

Study Area B – East Central Phase II (Laurel and Jaffrey Road Area)

Exhibit 15a shows the area that consists of 116 existing single-family dwellings on Laurel Circle, Laurel Drive, Hilldale Drive, Jaffrey Road, Court Run Lane, Sugar Brook Lane and portions of Warren Road and Davis Road south of Andrews Drive and north of Davis Road. The western boundary is adjacent to lots on Sugartown Road and the eastern boundary abuts lots that front on Grubb Road. The southern and eastern boundary areas – The Acres Project and East Central Project – are currently served by a pressure sewer system with effluent conveyed to the Valley Forge Sewage Treatment Plant for treatment. Under the current township zoning, an additional 29 single-family homes could be constructed.¹⁰

The Chester County Health Department records indicate that there has been a higher than normal number of repair/replacement permits issued for homes along Jaffrey Road. Based on this evidence and the age of the homes, the township believes it is necessary to plan for a public sewer extension to serve the area within the next five years.

There are 116 existing dwellings and a possibility of 29 future lots. Using an EDU rating of 275 GPD, the estimated capacity need will be 39,875 GPD. For the purposes of all of the evaluations, the capacity needs have been rounded to 40,000 GPD. Capacity has been included in the approved allocations for Willistown Township at the

¹⁰ Based on 4 acres per dwelling unit in the RU district and 2 acres per dwelling unit in the RA district.

Valley Forge Sewage Treatment Plant.

Four alternatives for this study area were evaluated. In each evaluation, it is assumed that the effluent generated will be conveyed to Valley Forge Sewage Treatment Plant. The alternatives are: 1) do nothing and monitor the on-site sewage disposal systems by means of a Sewage Management Program; 2) construct a pressure system with conveyance to the existing system that is part of the East Central Project; 3) construct the pressure system in two phases; and 4) construct a gravity system with conveyance to the existing system that is part of the East Central Project.

The costs for Alternatives 2 and 3 do not include the grinder pump or grinder pump installation at the individual homes.

Alternative 1 - The alternative to do nothing was dismissed in view of the evidence of need demonstrated through the County Health Department records and the survey mailed to the residents of the study area.

Alternative 2 – This alternative examines the installation of approximately 22,800 LF pressure sewer lines to serve the existing and future single-family homes in the study area with conveyance of the effluent to Valley Forge Sewage Treatment Plant. The estimated flow generated, including future development, would be 39,8725 GPD. Sufficient capacity is available in the Willistown allocations at the Valley Forge Sewage Treatment Plant to serve this study area. Two booster pump stations would need to be constructed at a cost of \$50,000 each, one at the Davis Road tie-in and the other at the Stoneybrook Lane tie-in. The existing pump station near the intersection of Grubb and Jaffrey Roads would need to be upgraded at a cost of \$25,000. Using a cost of \$38 per linear foot of pipe (obtained from a recently constructed pressure sewer project), the estimated project cost would be \$1,604,070 to sewer the entire area, including 30% for legal and engineering. With 116 current EDUs, the cost per EDU to construct the system is \$13,829. Exhibit 15b shows a proposed preliminary plan for construction of the public sewer to serve the area under this alternative.

Alternative 3 – Construction of the pressure sewer system in two phases as shown on Exhibit 15b:

Phase I – This phase would consist of the installation of 12,800 LF of pressure sewer and the construction of one booster pump station. The pressure sewer line would be installed on Spring Road to Warren Ave, extending north on Warren Avenue to Laurel Drive, continuing in the road right-of-way around Laurel Circle, and finally connecting to an existing tie-in on Stoneybrook Lane. The sewer extension would serve 70 current single family dwellings and provide for 13 possible future single family dwellings. The estimated cost for this phase is \$875,095, including 30% for legal and engineering. The cost per EDU to construct the system is \$12,502 (with 70 existing EDUs).

Phase II – This phase would install 10,000 LF of pressure sewer on Jaffrey Road, Sugar Brook Lane, and Davis Road, construct a new booster pump station at the tie-in on Davis Road, and upgrade the existing pump station near the intersection of Jaffrey and Grubb Roads. The sewer extension would serve 46 existing single family homes and 16 future single family homes. The estimated project cost is \$728,975, including 30% for legal and engineering. Based on 46 existing EDUs, the cost per EDU is \$15,848.

Phasing the project does not appear to have any obvious advantages to either the Township or the property owners from either the construction costs or cost per connection. This alternative was dismissed from further evaluation.

Alternative 4 – Construction of a gravity sewer system to serve the area with treatment of the wastewater at the Valley Forge Sewage Treatment Plant. Approximately 22,800 LF of gravity sewer lines will be installed to serve existing and any future homes in the area. Forty-six manholes will need to be installed at a cost of \$2,000 each. The estimated cost for construction, including 30% for legal and engineering, would be \$2,391,769. Based on 116 existing EDUs, the cost per EDU would be \$20,619. Based on the much greater expense of this system when compared to installing a pressure sewer system, this alternative was dismissed from further evaluation.

Recommended Alternative

The recommended alternative is Alternative #2. Financing one time as opposed to two will be much more economical for the Township and the cost per connection more palatable than having different costs for the two phases. In addition, purchasing all the materials together for one job could provide the property owners with additional savings, as opposed to buying the materials separately for the phases. The connection to existing public sewer would be made at existing tie-ins on Stoneybrook Lane and Grubb Road. Use of this capacity will reduce the available Valley Forge Sewage Treatment Plant allocation to 0.047 MGD. This balance will be reserved for miscellaneous connections of existing residential units with failing on-site systems.

VII. Implementation of the Recommended Alternatives

Study Area A – Northwest Quadrant

Implementation of the recommended alternative will require an agreement with East Goshen Municipal Authority for the purchase of sufficient capacity in the Ridley Creek Sewage Treatment Plant and a second agreement for periodic payment of the cost of treatment. Inquiries have been sent to East Goshen Municipal Authority for the cost of capacity. East Goshen has indicated that they are interested in selling the capacity to Willistown for this area.

Implementation will also require construction of collection and conveyance lines to the

interceptor serving the Ridley Creek Treatment Plant. Exhibit 9b is a preliminary proposed concept of how these lines could be installed.

Exhibit 14 charts the timeline for this project. Concurrently with the Department's review of this Plan, Willistown Township and East Goshen Municipal Authority will work out the details of the purchase of capacity and the periodic cost of treatment. Upon approval of this Plan and execution of the required agreements, the engineer will complete the design plans and the Part II construction permit will be completed and sent to the Department for review and approval. During the Department's review of the Part II permit, the bid specifications will be completed. It is estimated that construction of the project will take three to four months. Upon notification by the engineer that construction is substantially complete, notices to connect will be sent to the property owners in the project area. Willistown Township will require that all properties within 150 feet of the sewer line must connect to the public sewer.

Study Area B – East Central II (Laurel and Jaffrey Road areas)

Implementation of the recommended alternative will require construction of a pressure sewer line connecting to the existing pressure lines on Stoneybrook Lane and Grubb Road with conveyance to the Valley Forge Treatment Plant. The Valley Forge Sewer Authority will need to approve the use of the capacity that has previously been allocated. This plan recommends that the sewers be constructed within five years from approval of this plan. Exhibit 17 charts the timeline for this project.

VIII. Financing

Study Area A – Northwest Quadrant

Construction costs for this project are estimated at \$3,074,260. Capacity costs will be in addition to the construction costs. The estimated capacity fee per EDU will be \$3,127 (275 GPD/EDU x \$11.37/gallon).¹¹ Using \$3,127 per EDU, the estimated capacity cost will be the construction costs plus \$1,594,770 for the capacity or a total estimated project cost of \$4,669,030. Using 510 EDUs, the cost per EDU would be \$9,155. The costs paid by those connecting to the system will offset the gross construction costs. There are several options for financing the project: 1) through General Funds with reimbursement when tapping fees are paid; 2) a bond issue; or 3) joining with East Goshen Municipal Authority in a bond issue at the time of the Ridley Creek Sewage Treatment Plant Expansion. A bond pool financing authority such as Delaware Valley Regional Finance Authority offers more reasonable closing costs and ongoing interest than a conventional bond issue through a bank.

Study Area B – East Central II (Laurel and Jaffrey Road Areas)

¹¹ Cost per gallon estimated in 4/17/01 letter from East Goshen Municipal Authority.

Willistown Township
Chester County
Act 537 Plan Update

The construction costs for this project, as shown on Exhibit 16a, are estimated at \$1,604,070 for the entire project with a cost per EDU of \$13,829. The project will need to be financed through a conventional municipal bond or one through a bond pool funding authority such as Delaware Valley Regional Finance Authority. As previously stated, DVRFA bonds offer lower interest rates and closing costs than a conventional bond and would result in lower debt service to the customers.

IX. Supporting Documents

1. Municipal Resolution
2. Notice of Public Advertisement for 30 day public comment period
3. Responses to public comments
4. Evidence of request for municipal and county reviews
5. Responses to municipal and county comments
6. PHMC review
7. PNDI review
8. Act 537 Plan Checklist
9. Approved Plan of Study

X. Exhibits

1. Demographic Location Map
2. Zoning Map
3. Public Water Service Areas
4. Existing and proposed sewer facilities
5. On-site Sewage Disposal System Survey
 - a. Summary of Survey Results
 - b. Survey Results
 - c. Copy of Survey sent of Residents
6. Soils Map
7. Environmental Constraints Map from Township Comprehensive Plan
8. Vacant Parcel Analysis
9. Northwest Quadrant
 - a. Study Area
 - b. Preliminary proposed concept of sewer installation
10. Letter from Fox Ridge Farm Homeowner's Association
11. Letters to and from Christ Memorial Lutheran Church
12. Existing Inter-municipal Agreements between Willistown and East Goshen
13. Northwest Study Area – Estimated Project Costs
 - a. Gravity Sewer
 - b. Combination Gravity and Pressure Sewer
 - c. April 17, 2001 letter from East Goshen Municipal Authority
14. Northwest Study Area – Implementation Schedule
15. East Central Phase II
 - a. Study Area
 - b. Preliminary proposed concept of sewer installation
 - c. May 16, 2000 letter from VFSA re available capacity
16. East Central Phase II – Estimated Project Costs
 - a. Alternative 2
 - b. Alternative 3
 - c. Alternative 4
17. East Central Phase II – Implementation Schedule

18. Draft Sewage Management Ordinance

XI. Tables

1. Soils in the planning areas

11

**WILLISTOWN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA**

RESOLUTION NO. 19 OF 2001

**A RESOLUTION OF THE BOARD OF SUPERVISORS OF
WILLISTOWN TOWNSHIP ADOPTING OF AN UPDATE ACT
537 PLAN FOR WILLISTOWN TOWNSHIP.**

WHEREAS, Section 5 of the act of January 24, 1966, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act," as amended, and the Rules and Regulations of the Department of Environmental Protection (Department) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, requires the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality, and

WHEREAS, Yerkes Associates, Inc., Consulting Engineers, has prepared a plan entitled "Act 537 Plan Update for Willistown Township" that provides for:

1. Constructing gravity and pressure sewers in the Northwest Quadrant with conveyance to and treatment at the Ridley Creek Sewage Treatment Plant in East Goshen Township;
2. Construction a pressure sewer system for the East Central Phase II area with conveyance to the existing to the existing East Central Project sewer system and treatment at the Valley Forge Regional Sewage Treatment Plant; and
3. Implementing a sewage management program and ordinance to regulate the proper operation and maintenance of the on-site systems located within Willistown Township.

WHEREAS, Willistown Township finds that the Plan described above conforms to applicable zoning, subdivision, other municipal ordinances and plans and to a comprehensive program of pollution control and water quality management, and

WHEREAS, upon adoption of the plan implementation will begin as follows:

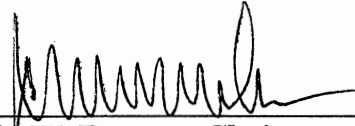
1. Enter into negotiations with East Goshen Township regarding capacity at the Ridley Creek Sewage Treatment Plant, identification of funding, and application for a construction permit;
2. Confirm capacity at Valley Forge Regional Sewage Treatment Plant, identification of funding, and application for a construction permit; and
3. Immediate development of a sewage management program to be in place within the Township in five years.

NOW, THEREFORE, BE IT RESOLVED that the Supervisors of the Township of Willistown hereby adopts and submits to the Department of Environmental Protection for its approval an update to the "Official Plan" of the municipality, the Act 537 Update Plan

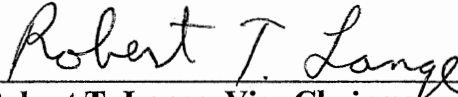
for Willistown. The municipality hereby assures the Department of the complete and timely implementation of the said plan as required by law. (Section 5, Pennsylvania Sewage Facilities Act as amended).

APPROVED THIS 26th DAY OF NOVEMBER, 2001.

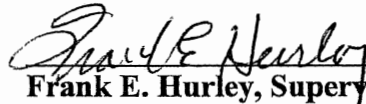
**WILLISTOWN TOWNSHIP
BOARD OF SUPERVISORS**



David W. Rawson, Chairman

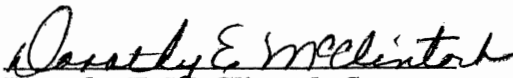


Robert T. Lange, Vice Chairman



Frank E. Hurley, Supervisors

I, Dorothy E. McClintock, Secretary, Willistown Township Board of Supervisors, hereby certify that the foregoing is a true copy of the Township's Resolution No, 19 adopted this 26th day of November, 2001


Dorothy E. McClintock, Secretary

Proof of Publication of Notice in Daily Local News

Under Newspaper Advertising Act No. 587. Approved May 16, 1929

State of Pennsylvania

County of Chester

ss:

No. 21198 Term. 2001

Debra S. Wood, Legal Advg. Rep of the Daily Local News Company, a corporation, of the County and State aforesaid, being duly affirmed, deposes and says that the Daily Local News, a newspaper of general circulation, published at 250 N. Bradford Ave., West Chester, PA, County and State aforesaid, was established November 19, 1872, and Incorporated December 11, 1911, since which date the Daily Local News has been regularly issued in said county, and that the printed notice or publication attached hereto is exactly the same as printed and published in the regular editions and issues of the said Daily Local News on the following dates viz:

October 19

A.D. 2001

Affiant further deposes that he/she is the proper person duly authorized by the Daily News Company, a corporation, publishers of said Daily Local News, a newspaper of general circulation, to verify the foregoing statement under oath, and that affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.

Debra S. Wood

COPY OF NOTICE OR PUBLICATION

affirmed to and subscribed before me this 19th

day of October 2001

Beverly A. Wolfe
Notary Public

My Commission Expires:

Notarial Seal
Beverly A. Wolfe, Notary Public
East Bradford Twp., Chester County
My Commission Expires June 4, 2005

Member, Pennsylvania Association of Notaries

Statement of Advertising Costs

Willistown Township

688 Sugartown Road

Malvern, PA 19355

PUBLIC NOTICE

At their meeting on November 26, 2001 the Willistown Township Board of Supervisors will be considering approval of an Act 537 Plan Update to the official sewage facilities plan for the Township. The Plan will examine the short and long-term sewage disposal needs of the entire Township of Willistown.

A 30-day public comment period will follow this advertisement. All comments should be made in writing, addressed to the Board of Supervisors and received no later than November 20, 2001.

A copy of the Act 537 Plan Update can be reviewed at the Township Building at 688 Sugartown Road, Malvern, Pennsylvania 19355, during normal business hours Monday through Friday from 9:00 a.m. through 4:00 p.m.

William A. Rosenberry
Township Manager

To DAILY LOCAL NEWS COMPANY, Dr
For publishing the notice or publication attached

hereto on the above stated dates..... \$

Probatng same..... \$

Total..... \$

Publisher's Receipt for Advertising Costs

The Daily Local News Company, a corporation, publishers of the Daily Local News, a newspaper of general circulation, hereby acknowledges receipt of the aforesaid notice and publication costs and certifies that the same has been duly paid.

DAILY LOCAL NEWS, a Corporation, Publishers of DAILY LOCAL NEWS, a newspaper of General Circulation.

By _____



Board of Supervisors of Willistown Township
Chester County

688 Sugartown Road Malvern, PA 19355
(610) 647-5300 Fax (610) 647-8156
www.willistown.pa.us

December 19, 2001

David V. Linahan, P.E.
Yerkes Associates, Inc.
P.O. Box 1568
1444 Phoenixville Pike
West Chester, PA. 19380-0078

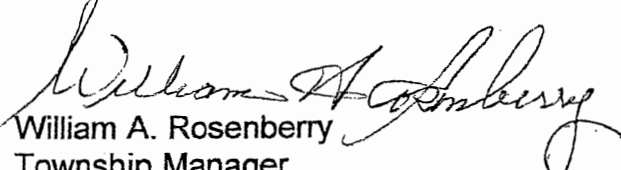
Re: Act 537 Plan Review

Dear David:

Please accept this letter as certification that during the thirty-day review period of the Act 537 Plan for the general public, we did not have any inquiries concerning the material.

The plan was offered for inspection at the Township Building for required time period as advertised.

Sincerely,


William A. Rosenberry
Township Manager

RECEIVED

DEC 21 2001

YERKES ASSOCIATES, INC.

IX-3



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

August 20, 2001

Chester County Health Department
Bureau of Environmental Health Protection
601 Westtown Road
Suite 288
P.O. Box 2747
West Chester, PA 19380-0990

RE: Act 537 Plan Update
Willistown Township
Chester County

Gentlemen:

Our client, Willistown Township, has asked us to send you, for review, the enclosed Act 537 Plan Update for the entire township.

You may contact the township manager, William A. Rosenberry or myself if you have any questions.

Very truly yours,

Yerkes Associates, Inc.

Suzanne K. Fish
Project Manager

skf

cc: William A. Rosenberry, Township Manager
file

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Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

August 20, 2001

Chester County Planning Commission
Government Services Center
601 Westtown Road
Suite 270
West Chester, PA 19382-4537

RE: Act 537 Plan Update
Willistown Township
Chester County

Gentlemen:

Our client, Willistown Township, has asked us to send you, for review, the enclosed Act 537 Plan Update for the entire township.

You may contact the township manager, William A. Rosenberry or myself if you have any questions.

Very truly yours,

Yerkes Associates, Inc.

Suzanne K. Fish
Project Manager

skf

cc: William A. Rosenberry, Township Manager
file

C:\MSOffice\My Documents\Willistown\ACT 537 PLANCCPC.doc

Professional services since 1874

1444 Phoenixville Pike, P. O. Box 1568, West Chester, PA 19380-0078 / Tel: 610-644-4254 / Fax: 610-640-0771



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

August 20, 2001

Willistown Township Planning Commission
688 Sugartown Road
Malvern, PA 19355

Re: Act 537 Plan Update
Willistown Township

Dear Members of the Commission:

Please review the enclosed copy of the township's Act 537 Plan Update and forward your comments to the township manager, William A. Rosenberry.

You may contact Mr. Rosenberry or myself if you have any questions.

Very truly yours,

Yerkes Associates, Inc.

Suzanne K. Fish
Project Manager

Cc: William A. Rosenberry
File

C:\MSOffice\My Documents\Willistown\ACT 537 PLAN\Twp PC.doc

Professional services since 1874

1444 Phoenixville Pike, P. O. Box 1568, West Chester, PA 19380-0078 / Tel: 610-644-4254 / Fax: 610-640-0771



THE COUNTY OF CHESTER



COMMISSIONERS:

Colin A. Hanna, Chairman
Karen L. Martynick
Andrew E. Dinniman

WILLIAM H. FULTON, AICP
Executive Director

PLANNING COMMISSION

Government Services Center, Suite 270
601 Westtown Road
P.O. Box 2747
West Chester, PA 19380-0990
(610) 344-6285
FAX: (610) 344-6515

October 15, 2001

David W. Rawson, Chairman
Willistown Township
Board of Supervisors
688 Sugartown Road
Malvern, PA 19355

Re: Act 537 Plan Update
Willistown Township

Dear Mr. Rawson:

The Chester County Planning Commission (CCPC) has reviewed the Draft 537 Plan dated August 2001, as required by Section 71.53(a)(2) of the Pennsylvania Sewage Facilities Act (Act 537). The update was prepared by Yerkes Associates, Inc. The Plan was received on August 22, 2001.

This Plan was prepared to address the existing and long-term wastewater treatment needs of Willistown Township.

The following comments are offered based on review of the draft Plan:

A. Consistency with the County Plan – *Landscapes*:

1. *Landscapes*, through the use of the *Livable Landscapes Map*, identifies four general land patterns, or landscapes, of future development in the County – urban, suburban, rural and natural. The Suburban Landscape is to contain a mix of uses and higher densities of development than those found in the Rural Landscape. In order for this pattern to occur, *Landscapes* supports the provision of infrastructure and public services, such as public sewer systems.
2. The northern portion of Willistown Township is located primarily in the Suburban Landscape and the Rural Landscape in the south. The area proposed to be served by public sewers appears to be consistent with *Landscapes* as it is primarily within the area identified as a Suburban Landscape.

Page: 2

October 15, 2001

Re: Act 537 Plan Update
Willistown Township

B. Selection of Alternative:

1. With respect to the selection of one form of collection and conveyance over another, we do not have the technical qualifications to comment on the decision presented in the Plan. Local officials should consider the overall capital costs of constructing the system and the longer term operation and maintenance costs. These are the elements that will most directly impact their constituents.
2. We commend the Township officials for their decision to address the problem of failing on-lot sewage systems with the installation of public sewers in the northern portion of the Township and for the decision to not provide sewers to the Rural and Natural Landscapes within the Township. The Township officials are also to be commended for their decision to implement a Sewage Management Program and ordinance to regulate the proper operation and maintenance of the on-lot systems. *Landscapes* policy encourages the provision of sewer services to support development in Suburban Landscapes while restricting their extension into Rural and Natural Landscapes.

C. General Comments:

1. Page 1. Plan Summary – A reference is made to Exhibit 4, Existing and Proposed Sewer Facilities, to show the northern part of the Township that is being served by the Valley Forge Treatment Plant. This area is indicated as being represented by green and gold, however, this area appears to be blue. A correction should be made for consistency before submittal to PADEP.
2. Page 2. Plan Summary – A copy of the survey results and map showing the location of the failed on-lot system is referenced as being included in Exhibit 3. This should be corrected to Exhibit 5 and 5a.
3. Page 2. Northwest Quadrant – A reference is made to Exhibit 8, Northwest Study Area. This map was not found in the copy provided for our review. If Exhibit 8A is intended to be this map, the reference should be revised.
4. Page 4. Chesterdale Sewer Plant – Exhibit 1 is referenced as indicating the location of the plant and service area, however, this exhibit only shows the location of the Township within the County. The service area for the Chesterdale Sewer Plant is shown on on Exhibit 4. The reference to Exhibit 1 should be corrected before submittal to PADEP.
5. Page 7. Topography – A copy of the Township Comprehensive Plan is referenced as being included with the Act 537 Plan Update. This was not included with the copy provided for our review. Be sure to include it in the copy submitted to PADEP.
6. Page 8. Soils in the Planning Area – Exhibit 5 is referenced as illustrating the locations of suitable and marginal soil types. However, the map is labeled as Exhibit 6. The text should be corrected to reference Exhibit 6.

Page: 3

October 15, 2001

Re: Act 537 Plan Update
Willistown Township

7. Page 10. Demographic Analysis – The location map is referenced as Exhibit 6, but is labeled as Exhibit 1. The test should be corrected to reference Exhibit 1.
8. Page 14. Study Area A – Northwest Quadrant – Paragraph two refers to Exhibit 8. This map was not found in the copy provided for review. If Exhibit 8A is intended to be this map, the reference should be revised.
9. Page 14. Study Area A – Northwest Quadrant – Paragraph four refers to the August 21, 2000 letter from the Foxridge Homeowners' Association as Exhibit 9. However, the letter presented in Exhibit 9 is dated January 13, 1999. This should be corrected to include the correct date and corresponding letter.
10. Page 14. Study Area A – Northwest Quadrant – The last paragraph refers to the 1993 inquiry from the Christ Memorial Lutheran Church and references this letter as Exhibit 10. However, the letter included in Exhibit 10 is from September 26, 2000. This should be corrected to include the correct date and corresponding letter.
11. Page 16. Alternative #2 – A reference is made to the allocations proposed for Study Areas C and D, however, there is no mention of these areas elsewhere in the text or in any exhibits. While it does not appear that Study Areas C and D were included in this Act 537 Plan Update, since they are mentioned, we suggest they be included for reference purposes in Exhibit 4.
12. Page 16. Alternative #3 – A reference is made to a draft agreement for the mechanics of the changes being included with the Act 537 Plan Update. This draft agreement was not found in the copy provided for review. Be sure to include this before submittal to PADEP.
13. Page 16. The footnote references Exhibit 15a as the May 16, 2000 memo from the Valley Forge Sewer Authority. This Exhibit is labeled as Exhibit 15c. A correction should be made to the footnote.
14. Page 20. Study Area A – Northwest Quadrant – The estimated construction costs for the project are given as "\$2,56,940". This figure appears to be missing a number, and should be corrected. The figure should also indicate that the dollar estimate given is for the year 2001.
15. Exhibit 5. On Site System Sewage System Survey – A label or some other indication should be included to identify the survey as Exhibit 5.
16. Exhibit 6. Soils Exhibit – The areas depicted as marginal soils (yellow) are not easily distinguishable from the unsuitable soils (gold) due to the similarity of colors used. Perhaps less similar colors should be used on this map for easier identification between the two soil qualities.

Page: 4

October 15, 2001

Re: Act 537 Plan Update
Willistown Township

17. Pages 13 – 20. Study Areas and Alternatives – Support Document IX-8 (Page 11) indicates pages 13 – 20 of the Plan Update as addressing Section 71.21(a)(5)(i) of Chapter 71. However, based on our interpretation, we do not feel the evaluation of the selected alternative for consistency with the objectives and policies of Section 71.21(a)(5)(i) of Chapter 71 is clearly presented and adequate for submittal to PADEP. We recommend revisions be made to the Study Areas and Alternatives section to clearly address the consistency review.
18. Page 22. X. Exhibits – Exhibit 15c is listed as the May 16, 2001 letter from VFSA re available capacity. However, the letter is dated May 16, 2000.

We trust that these comments will be of assistance to you as you prepare the final document for submission to PADEP. Thank you for the opportunity to offer comments on this plan.

Sincerely,


William H. Fulton, AICP
Executive Director

WHF/CG/krp

cc: Glenn Stinson, PADEP
Ralph DeFazio, CCHD
William A. Rosenberry, Township Manager
Suzanne K. Fish, Yerkes Associates, Inc.



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

January 28, 2002

Chester County Planning Commission
Attn: William H. Fulton, AICP
601 Westtown Rd, Suite 270
West Chester, PA 19380-0990

Re: Act 537 Plan Update
Willistown Township

Dear Mr. Fulton,

As part of a Township's responsibility to review, adopt, and implement official plans, Willistown Township is required under PA Code Title 25 § 71.31(b) to request, review, and consider comments by the local and county planning agencies and the county health department. On behalf of the Township, we thank you for the timely comments in your letter dated October 15, 2001. We have reviewed your comments and respond to them as follows:

- A. Consistency with the County Plan – **Landscapes** – Special attention was given to making this update consistent with the County Plan by trying to provide wastewater facilities that not only protect the public health but also the natural resources within the Township.
- B. Selection of Alternatives:
 - 1. An estimate of the capital costs for constructing the system has been provided. The operation and maintenance costs will be evaluated when determining sewer user charges.
 - 2. The Township is working to protect the public health and the natural resources within the boundaries of the Township and feels that the best way to do that is to properly operate and maintain all on-lot systems located within the Township. This includes providing public sewer to the areas of the Township with the greatest need.

A. General Comments:

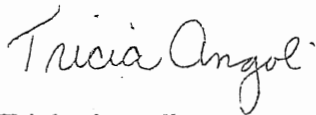
Professional services since 1874

1444 Phoenixville Pike, P. O. Box 1568, West Chester, PA 19380-0078 / Tel: 610-644-4254 / Fax: 610-640-0771

1. The Exhibit and text have been modified for consistency. All color exhibits have been redone in black and white. Color copies are expensive and it is not always possible to reproduce the colors exactly from one copy to the next.
- 2.-16. Corrections and modifications have been made to the text and exhibits based on these comments.
17. The provisions under Section 71.21(a)(5)(i) pertain mainly to new land development proposed within the Township. We are not proposing to sewer any new land developments at this time. Only existing homes are being sewered. Detailed planning for vacant parcels within the study areas will be included in planning modules for new land development in the future. At that time compliance with Section 71.21(a)(5)(i) will be done.
18. The date of the letter referenced in the text has been changed.

Very truly yours,

Yerkes Associates, Inc.



Tricia Angoli

cc: Ralph DeFazio, Chester County Health Dept
Willistown Township



THE COUNTY OF CHESTER



COMMISSIONERS:

Colin A. Hanna, Chairman
Karen L. Martynick
Andrew E. Dinniman

CHESTER COUNTY HEALTH DEPARTMENT

601 Westtown Road, Suite 288
P.O. Box 2747
West Chester, PA 19380-0990
FAX: 610-344-5934

Sewage/Wells 610-344-6526
Food/Institution 610-344-6689
Laboratory 610-344-6439

Certified Food Manager 610-344-5938
Solid Waste Mgt./Recycling 610-344-5937
Weights & Measures/Consumer Affairs 610-344-6150
Engineering/Public Water 610-344-6237

David W. Rawson, Chairman
Willistown Township
Board of Supervisors
688 Sugartown Road
Malvern, PA 19355

RE: Act 537 Plan Update
Willistown Township

RECEIVED

DEC 19 2001

YERKES ASSOCIATES, INC.

Dear Mr. Rawson:

December 17, 2001

The Chester County Health Department (CCHD) has reviewed the draft Act 537 Plan Update dated August 2001, as required in Chapter 71 of the Pennsylvania Sewage Facilities Act (Act 537). Yerkes Associates, Inc prepared this update. This draft of the plan was intended to be submitted to the CCHD during August of 2001, however, it was submitted on December 11, 2001. At the time of our review the comments of the Chester County Planning Commission (CCPC), dated October 15, 2001, have been received.

Based on the information included in the Plan Summary, we offer the following comments:

The draft plan that was presented to the CCHD does not include any of the colored diagrams that are referenced in the plan. This made interpretation a bit more difficult than was intended. Additionally, there are many administrative comments included as General Comments in the CCPC review that have not been corrected in the version submitted recently to the CCHD. Please be sure that the copy that reaches PA DEP contains all of the appropriate references.

Willistown Township is applauded for their decision to implement a Municipal Sewage Management Program. Such a program will provide much needed oversight of existing sewage facilities with the probable end result of more efficient operation and increased longevity of these facilities.

Problem areas that use on-site sewage systems have been evaluated and malfunctions are to be replaced by public sewerage facilities. The use of a mixture of collection and conveyance technology is being proposed as a means of

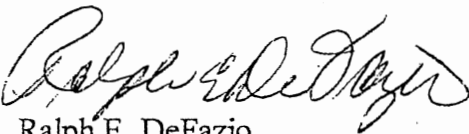
Willistown Township
Act 537 Plan Update
December 13, 2001
Page 2.

providing the most simple and cost effective alternative to installing the proposed public sewerage infrastructure. The CCHD agrees with the logic of this decision.

Therefore, it is the opinion of this Department that this plan will adequately provide for the sewage facilities needs of Willistown Township and could be approved. If this plan is approved, a copy should be forwarded to PA DEP for their further review.

Please contact this Department at 610-344-6239 with any questions concerning these comments.

Sincerely,



Ralph E. DeFazio
Environmental Health Supervisor

CC: Glenn Stinson, PA DEP
William H. Fulton, CCPC
William A. Rosenberry, Township Manager, Willistown Township
Suzanne K. Fish, Yerkes Associates, Inc. ✓



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

January 28, 2002

Chester County Health Department
Attn: Ralph DeFazio
601 Westtown Rd, Suite 288
West Chester, PA 19380-0990

Re: Act 537 Plan Update
Willistown Township

Dear Mr. DeFazio,

As part of a Township's responsibility to review, adopt, and implement official plans, Willistown Township is required under PA Code Title 25 § 71.31(b) to request, review, and consider comments by the local and county planning agencies and the county health department. On behalf of the Township, we thank you for the timely comments in your letter dated December 17, 2001. We have reviewed your comments and respond to them as follows:

The colored exhibits have been redone in black and white. Color copies are expensive and it is not always possible to reproduce the colors exactly from one copy to the next. Changes have been made in the text to reflect the changes in the exhibits.

All the administrative comments provided by the Chester County Planning Commission have been addressed.

A current copy of the Willistown Township Act 537 Plan Update, with all of the changes, will be sent to you.

Very truly yours,

Yerkes Associates, Inc.

Tricia Angoli

cc: William H. Fulton, Chester County Planning Commission
Willistown Township

Professional services since 1874

1444 Phoenixville Pike, P. O. Box 1568, West Chester, PA 19380-0078 / Tel: 610-644-4254 / Fax: 610-640-0771

WILLISTOWN TOWNSHIP PLANNING COMMISSION

**688 Sugartown Road
Malvern, PA 19355**

**Phone 610.647.5300
Fax 610.647.8156**

September 20, 2001

David W. Rawson, Chairman
Board of Supervisors
688 Sugartown Road
Malvern, Pa 19355

Re: Act 537 Plan-Official Sewage Facilities Plan

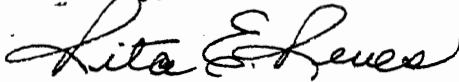
Dear Chairman Rawson,

In accordance with regulations governing the adoption of the updated Act 537 Plan for Willistown Township, the Planning Commission reviewed the Plan at their regularly scheduled meeting of September 19, 2001.

The Commission is pleased to support the extension of the public sewer system into the Stonehenge area of the Township as well as on Laurel Drive, Laurel Circle and Jaffrey Road. These areas have experienced difficulties with their present on-site systems and many of the residents will welcome the coming of sewers.

The Commission commends the Supervisors for their attention to the problem of failing on-site sewer systems in the older developed portions of the Township.

Sincerely,

A handwritten signature in cursive script, reading "Rita E. Reves".

Rita E. Reves,
Chairman



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Post Office Box 1026
Harrisburg, Pennsylvania 17108-1026

June 6, 2000

Suzanne K. Fish
Yerkes Associates, Inc.
1444 Phoenixville Pike
PO Box 1568
West Chester, PA 19380

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

Re: File No. ER 2000-2112-029-A
DEP ACT 537 Program: Act 537
Planning, Official Sewage Facilities
Plan Update--Act 537, Willistown
Twp., Chester Co.

Dear Ms. Fish:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988). This review includes comments on the project's potential effect on both historic and archaeological resources.

This project is a planning study, therefore this office cannot assess the effects on specific historical and archaeological resources at this time. During the project planning stages, provisions should be made for the identification of historic and archaeological resources listed in or eligible for the National Register of Historic Places and for the assessment of the effects on these resources. The Bureau for Historic Preservation maintains records of National Register listed and eligible resources as well as archaeological surveys (P.A.S.S. files) and historic resource survey files. These surveys vary in their scope and methodology, therefore we recommend that you contact local historical societies and consult tax and deed records for additional information regarding your project area.

If you need further information in this matter please consult Mark Shaffer at (717) 783-9900. If you need a **status only** of the reviewed project please call Tina Webber at (717) 705-4036.

Sincerely,

Kurt W. Carr, Chief
Division of Archaeology &
Protection

CC: DEP, Southeast Region
KWC/lmm

RECEIVED

JUN 12 2000

EXHIBIT IX-6 YERKES ASSOCIATES, INC.



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

July 26, 2000

Department of Conservation and Natural Resources Bureau of Forestry (FAS)
PNDI Program
PO Box 8552
Harrisburg, PA 17105-8552

Attention: Andrew Gorman, Environmental Review Assistant

Re: Willistown Township, Chester County
PER NO. 9569

Dear Mr. Gorman:

As Consulting Engineer for Willistown Township, we are in receipt of your letter dated June 27, 2000 in response to our notification of the preparation of an Official Sewage Facilities Plan for the municipality.

At this time, the document is intended to be a planning tool only. Prior to any construction, your comments will be given full consideration.

Please contact me if you have any questions.

Very truly yours,

Yerkes Associates, Inc.

Suzanne K. Fish
Project Manager

cc: William A. Rosenberry, Township Manager

C:\MSOffice\My Documents\Willistown\ACT 537 PLAN\Resp to PNDI.doc

EXHIBIT IX-6

Professional services since 1874

2 of 2



Pennsylvania Natural Diversity Inventory

Scientific information and expertise for the conservation of Pennsylvania's native biological diversity
June 27, 2000

RECEIVED

fax 717-783-5109
717-787-3444

Bureau of Forestry

JUN 30 2000

Suzanne Fish
Yerkes Assoc. Inc.
1444 Phoenixville Pike
West Chester, PA 19380

YERKES ASSOCIATES, INC.

Re: Pennsylvania Natural Diversity Inventory Review of Sewage Facilities Plan, Willistown Township, Chester County, PA
PER NO: 9569

Dear Ms. Fish:

In response to your request on May 15, 2000 to review the above mentioned project, the Pennsylvania Natural Diversity Inventory (PNDI) information system was used to gather information regarding the presence of resources of special concern within the referenced site. PNDI records indicate potential impact to species of special concern in the project vicinity.

Aster depauperatus – Serpentine Aster, *Senecio anonymus* – Plain Ragwort, *Linum intercursum* – Sandplain Wild Flax, *Talinum teretifolium* – Round-leaved Fame-flower, *Carex meadii* – Mead's Sedge, *Fimbristylis annua* – Annual Fimbry, *Scleria pauciflora* – Few Flowered Nutrush, *Aristida purpurascens* – Arrow-feathered Three Awned, and *Sporobolus heterolepis* – Prairie Dropseed, are all plant species of special concern associated with the rare and unique serpentine barren community. The Sugartown Serpentine Barrens, containing the above species, are found in the southern portion of the proposed project area.

Based on the information we have received regarding the project our office recommends that a site survey be conducted by a qualified botanist before the onset of any earth disturbance associated with the project, in order to confirm or deny the presence of this species in the project area. Please contact the office with the results of the survey and to set up a field visit to discuss measures necessary to avoid impact to the species.

This response represents the most up-to-date summary of the PNDI data files and is applicable for one year. However, an absence of recorded information does not necessarily imply actual conditions on site. A field survey of any site may reveal previously unreported populations. Should project plans change or additional information on listed or proposed species become available this determination may be reconsidered.

EXHIBIT IX-7



Pennsylvania Natural Diversity Inventory

Scientific information and expertise for the conservation of Pennsylvania's native biological diversity

PNDI is a site specific information system that describes significant natural resources of Pennsylvania. This system includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. PNDI is a cooperative project of the Department of Conservation and Natural Resources, The Nature Conservancy, and the Western Pennsylvania Conservancy.

Please phone this office if you have questions concerning this response or the PNDI system.

Sincerely,

Andrew Gorman
Environmental Review Assistant

EXHIBIT IX-7

2 of 2

Commonwealth of Pennsylvania
Department of Environmental Protection
Bureau of Water Quality Protection

ACT 537 PLAN CONTENT AND ENVIRONMENTAL ASSESSMENT CHECKLIST

For specific details covering Act 537 planning requirements, refer to Chapters 71 and 73 of DEP's Regulations.

Municipality: WILLISTOWN TOWNSHIP County: CHESTER COUNTY

Local Municipal Contact Official: WILLIAM A. ROSENBERRY

Telephone Number of Official: 610-647-5300

Consultant: YERKES ASSOCIATES, INC.

Consultant's Telephone Number: 610-644-4254

Consultant's Contact Person: TRICIA ANGOLI

Title of Submission: ACT 537 PLAN UPDATE

Date Submitted: _____

About this checklist

- * DEP publication 3640-BK-DER1480 11/92, "A Guide For Preparing Act 537 Update Revisions -- November 1992", is obsolete. Do not use checklist pages from that publication.
- * You must complete and attach this checklist when you submit the plan to the department for review and approval.
- * This checklist is composed of two parts, one for Administrative Completeness and one for General Plan Content. A plan must be "administratively complete" in order to be formally reviewed and approved by the department. The General Plan Content checklist identifies each of the issues which must be addressed in your Act 537 Plan Update based on a pre-planning meeting between you and/or your consultant and the Department. The Administrative Completeness checklist is found on page 3. The General Content checklist is found on pages 4 through 14. PENNVEST funded or applicant plans must address planning requirements on page 15.
- * You must use the right-hand column blanks in the checklist to identify the page in the plan on which each planning issue is found or reference a previously approved update or special study (title and page number).
- * If you determine a planning issue is not applicable even though it was previously thought to be needed, please explain your decision within the text of the plan (or as a footnote) and indicate the page number where this documentation is found.
- * After Municipal Adoption by Resolution, submit three copies of the plan, any attachments or addenda, and this checklist to the department.

ADMINISTRATIVE COMPLETENESS CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	In addition to the main body of the plan, the plan must include items one through eight listed below to be accepted for formal review by the department. Incomplete Plans will be returned unless the municipality is clearly requesting an advisory review.
_____	_____	1. Table of Contents
_____	_____	2. Plan Summary
_____	<u>1-3</u>	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - Title 25, §71.21.a.7.i).
_____	<u>13-19</u>	B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s). (Reference Title 25 §71.21.a.7.ii).
_____	<u>13-19</u>	C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference Title 25, §71.21.a.7.ii).
_____	<u>13-19</u>	D. Identify the municipal commitments necessary to implement the Plan. (Reference Title 25, §71.21.a.7.iii).
_____	<u>X-14 AND X-17</u>	E. Provide a schedule of implementation for the project which identifies the MAJOR milestones with dates necessary to accomplish the project to the point of operational status. (Reference Title 25, §71.21.a.7.iv).
_____	<u>IX-1</u>	3. Original, signed and sealed Resolution of Adoption by the municipality which contains, at a minimum, alternatives chosen and a commitment to implement the Plan in accordance with the implementation schedule. (Reference Title 25, §71.31.f) Section V.F. of the Planning Guide.
_____	<u>IX-4</u>	4. Evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies of the municipality, planning agencies of the county, planning agencies with areawide jurisdiction (where applicable), and any existing county or joint county departments of health. (Reference-Title 25, §71.31.b) Section V.E.1 of the Planning Guide.
_____	<u>IX-2</u>	5. Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30 day comment period. (Reference-Title 25, §71.31.c) Section V.E.2 of the Planning Guide.
_____	<u>IX-3</u>	6. Copies of ALL written comments received and municipal response to EACH comment in relation to the proposed plan. (Reference-Title 25, §71.31.c) Section V.E.2 of the Planning Guide.
_____	<u>X-14 AND X-17</u>	7. A complete project implementation schedule with milestone dates specific for each existing and future area of need. Other activities in the project implementation schedule should be indicated as occurring a finite number of days from a major milestone. (Reference-Title 25, §71.31.d) Section F of the Planning Guide. Include dates for the future initiation of feasibility evaluations in the project's implementation schedule for areas proposing completion of sewage facilities for planning periods in excess of five years. (Reference Title 25, §71.21.b).
_____	<u>IX-6 AND IX-7</u>	8. Documentation indicating that the appropriate agencies have received, reviewed and concurred with the method proposed to resolve identified inconsistencies within the proposed alternative and consistency requirements in 71.21.(a)(5)(i-iii). (Reference-Title 25, §71.31.e). Appendix B of the Planning Guide.

GENERAL PLAN CONTENT CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	Item Required
I. Previous Wastewater Planning		
		A. Identify and briefly analyze all existing wastewater planning that:
_____	<u>3-7</u>	1. Has been previously undertaken under the Sewage Facilities Act (Act 537). (Reference-Act 537, Section 5 §d.1).
_____	<u>N/A</u>	2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference-Title 25, §71.21.a.5.i.A-D). Section V.F of the Planning Guide.
_____	<u>N/A</u>	3. Is anticipated or planned by applicable sewer authorities. (Reference-Title 25, §71.21.a.5.i.A). Section V.D. of the Planning Guide.
_____	<u>N/A</u>	4. Has been done through planning modules for new land development, planning "exemptions" and addenda. (Reference-Title 25, §71.21.a.5.i.A).
		B. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:
_____	<u>X-2</u>	1. All land use plans and zoning maps which identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference-Title 25, §71.21.a.3.iv).
_____	<u>X-2</u>	2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference-Title 25 §71.21.a.3.iv).
_____	<u>N/A</u>	3. All limitations and plans related to floodplain and stormwater management and special protection (Ch. 93) areas. (Reference-Title 25 §71.21.a.3.iv) Appendix B, Section II.F of the Planning Guide.
II. Physical and Demographic Analysis utilizing written description and mapping (All items listed below require maps, and all maps should show all current lots and structures and be of appropriate scale to clearly show significant information).		
_____	<u>X-4</u>	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference-Title 25, §71.21.a.1.i).
_____	<u>X-7</u>	B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference-Title 25, §71.21.a.1.ii).
_____	<u>X-6</u>	C. Soils - Analysis with description by soil type and soils mapping. Show areas suitable for in-ground on-lot systems, elevated sand mounds, individual residential spray irrigation systems, and areas unsuitable for soil dependent systems. (Reference-Title 25, §71.21.a.1.iii). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference-Title 25, §71.21.a.1.iii).

**DEP
Use
Only****Plan
Page No.****Item Required**

<u>N/A</u>	D. Geologic Features - (1) Identification through analysis, (2) mapping and (3) their relation to existing or potential nitrate-nitrogen pollution and drinking water sources. Include areas where existing nitrate-nitrogen levels are in excess of five mg/l. (Reference-Title 25, §71.21.a.1.iii).
<u>7-9</u>	E. Topography - Depict slopes that are suitable for conventional systems; slopes that are suitable for elevated sand mounds; slopes that are unsuitable for on-lot systems. (Reference-Title 25, §71.21.a.1.ii).
<u>X-3</u>	F. Potable Water Supplies - Identification through mapping, description and analysis to include available public water supply capacity and aquifer yield for groundwater supplies. (Reference-Title 25 §71.21.a.1.vi). Section V.C. of the Planning Guide.
<u>N/A</u>	G. Wetlands-Identify wetlands as defined in Title 25, Chapter 105 by description, analysis and mapping. Include National Wetland Inventory mapping and potential wetland areas per USDA, SCS mapped hydric soils. Proposed collection, conveyance and treatment facilities and lines must be located and labeled, along with the identified wetlands, on the map. (Reference-Title 25, §71.21.a.1.v). Appendix B, Section II.I of the Planning Guide.

III. Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs

	A. Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including:
<u>10-12, X-4</u>	1. Location, size and ownership of treatment facilities, main intercepting lines, pumping stations and force mains including their size, capacity, point of discharge. Also include the name of the receiving stream, drainage basin, and the facility's effluent discharge requirements. (Reference-Title 25, §71.21a.2.i.A).
<u>10-12</u>	2. A narrative and schematic diagram of the facility's basic treatment processes including the facility's NPDES permitted capacity, and the Clean Streams Law permit number. (Reference-Title 25, §71.21.a.2.i).
<u>10-12</u>	3. A description of problems with existing facilities (collection, conveyance and/or treatment), including existing or projected overload under Title 25, Chapter 94 (relating to municipal wasteload management) or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule or regulation of the department. (Reference-Title 25, §71.21.a.2.i.B).
<u>10-12</u>	4. Details of scheduled or in-progress upgrading or expansion of treatment facilities and the anticipated completion date of the improvements. Discuss any remaining reserve capacity and the policy concerning the allocation of reserve capacity. Also discuss the compatibility of the rate of growth to existing and proposed wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.i & ii).
<u>10-12</u>	5. A detailed description of operation and maintenance requirements of the municipality for on-lot systems and the status of past and present compliance with these requirements and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C).
<u>10-12</u>	6. Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference-Title 25, §71.21.a.4.i & ii).

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- B. Using DEP's manual titled "Sewage Disposal Needs Identification Guidance," identify, map and describe areas that utilize individual and community on-lot sewage disposal and, unpermitted collection and disposal systems ("wildcat" sewers, borehole disposal, etc.) and retaining tank systems in the planning area including:

10-12

1. The types of systems in use. (Reference-Title 25, §71.21.a.2.ii.A).

X5a, X5b,
X5c

2. A sanitary survey complete with a description of documented and potential public health pollution, and operational problems (including malfunctioning systems) with the systems, including violations of local ordinances, the Sewage Facilities Act, the Clean Stream Law or regulations promulgated thereunder. (Reference-Title 25, §71.21.a.2.ii.B).

X5a, X5-b,
X5c

3. A comparison of the types of on-lot sewage systems installed in an area with the types of systems which are appropriate for the area according to soil, geologic conditions, topographic limitations sewage flows, and Title 25 Chapter 73 (relating to standards for sewage disposal facilities). (Reference-Title 25, §71.21.a.2.ii.C).

X5a, X5b,
X5c

4. An individual water supply survey to identify possible contamination by malfunctioning on-lot sewage disposal systems consistent with the DEP Sewage Disposal Needs Identification Guidance manual. (Reference-Title 25 §71.21.a.2.ii.B).

- C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:

X-5b

1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference-Title 25 §71.71).

N/A

2. Quantities of the types of sludges or septage generated. (Reference-Title 25 §71.71).

N/A

3. Present disposal methods, locations, capacities and transportation methods. (Reference-Title 25 §71.71).

IV. Future Growth and Land Development

- A. Delineate and describe the following through map, text and analysis:

13

1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of EDU's in development, total number of EDU's currently developed and total number of EDUs remaining to be developed (include time schedule for EDU's remaining to be developed). (Reference-Title 25, §71.21.a.3.i).

X-2

2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference-Title 25, §71.21.a.3.ii). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference-Title 25, §71.21.a.3.iv).

X-2, X-8

3. Future growth areas with population and EDU projections for these areas using historical, current and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities. (Reference-Title 25, §71.21.a.1.iv). (Reference-Title 25, §71.21.a.3.iii).

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<u> </u>	<u>X-2</u>	4. Zoning, and/or subdivision regulations; local, county or regional comprehensive plans; and existing plans of a Commonwealth agency relating to the development, use and protection of land and water resources with special attention to: (Reference-Title 25, §71.21.a.3.iv). --public ground/surface water supplies --recreational water use areas --groundwater recharge areas --industrial water use --wetlands
<u> </u>	<u>N/A</u>	5. Sewage planning to provide adequate wastewater treatment for the municipality. This planning must be related to both the <u>five and ten year</u> future planning periods and be based on growth impacts on existing and proposed wastewater collection and treatment facilities. (Reference-Title 25, §71.21.a.3.v).
V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities		
A. Conventional collection, conveyance, treatment and discharge alternatives including:		
<u> </u>	<u>N/A</u>	1. The potential for regional wastewater treatment. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>13-17</u>	2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference-Title 25, §71.21.a.4.i).
<u> </u>	<u> </u>	3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference-Title 25, §71.21.a.4.ii).
<u> </u>	<u>10-12</u>	a. Repair. (Reference-Title 25, §71.21.a.4.ii.A).
<u> </u>	<u>10-12</u>	b. Upgrading. (Reference-Title 25, §71.21.a.4.ii.B).
<u> </u>	<u>10-12</u>	c. Reduction of hydraulic or organic loading to existing facilities. (Reference-Title 25, §71.71).
<u> </u>	<u>10-12</u>	d. Improved operation and maintenance. (Reference-Title 25, §71.21.a.4.ii.C).
<u> </u>	<u>10-12</u>	e. Other applicable actions that will resolve or abate the identified problems. (Reference-Title 25, §71.21.a.4.ii.D).
<u> </u>	<u>13-17</u>	4. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference-Title 25, §71.21.a.4.iii).
<u> </u>	<u>N/A</u>	5. Repair or replacement of collection and conveyance system components. (Reference-Title 25, §71.21.a.4.ii.A).
<u> </u>	<u>13-17</u>	6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.ii.B).

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Page No.****Item Required****B. The use of individual sewage disposal systems including individual residential spray irrigation systems based on:**X-6

1. Soil and slope suitability. (Reference-Title 25, 71.21.a.2.ii.C).

N/A

2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).

1

3. The establishment of a sewage management program. (Reference-Title 25, §71.21.a.4.iv). See also Part "F" below.

4. The repair, replacement or upgrading of existing malfunctioning systems in areas suitable for on-lot disposal considering: (Reference-Title 25, §71.21.a.4).

N/A

a. Existing technology and sizing requirements of Title 25 Chapter 73. (Reference-Title 25, §73.31-73.72).

N/A

b. Use of expanded absorption areas or alternating absorption areas. (Reference-Title 25, §73.16).

N/A

c. Use of water conservation devices. (Reference-Title 25, §71.73.b.2.iii).

C. The use of small flow sewage treatment facilities or package treatment facilities to serve individual homes or clusters of homes based on: (Reference-Title 25, §71.64.d).N/A

1. Treatment and discharge requirements. (Reference-Title 25, §71.64.d).

N/A

2. Soil suitability. (Reference-Title 25, §71.64.c.1).

N/A

3. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.64.c.2).

N/A

4. Agency or other controls over operation and maintenance requirements. (Reference-Title 25, §71.64.d). See Part "F" below.

D. The use of community land disposal alternatives including:N/A

1. Soil and site suitability. (Reference-Title 25, 71.21.a.2.ii.C).

N/A

2. Preliminary hydrogeologic evaluation. (Reference-Title 25, 71.21.a.2.ii.C).

N/A

3. Controls over operation and maintenance requirements through a Sewage Management Program (Reference-Title 25, 71.21.a.2.ii.C). See Part "F" below.

N/A

4. The rehabilitation or replacement of existing malfunctioning community land disposal systems. (See Part V, B, 4, a, b, c above). See also Part "F" below.

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E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference- Title 25, §71.21.a.4).

_____ N/A

1. Commercial, residential and industrial use. (Reference-Title 25, §71.63.e).

_____ N/A

2. Designated conveyance facilities (pumper trucks). (Reference-Title 25, §71.63.b.2).

_____ N/A

3. Designated treatment facilities or disposal site. (Reference-Title 25, 71.63.b.2).

_____ N/A

4. Implementation of a retaining tank ordinance by the municipality. (Reference-Title 25, §71.63.b.2). See Part "F" below.

_____ N/A

5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference-Title 25, §71.63.c.2).

F. Sewage management programs to assure the future operation and maintenance of existing and proposed sewage facilities through:

_____ 1-3

1. Municipal ownership or control over the operation and maintenance of individual on-lot sewage disposal systems, small flow treatment facilities, or other traditionally non-municipal treatment facilities. (Reference-Title 25, §71.21.a.4.iv).

_____ 1-3

2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference-Title 25, §71.73.b.1.).

_____ 1-3

3. Required maintenance of sewage disposal systems including septic and aerobic treatment tanks and other system components on a schedule established by the municipality. (Reference-Title 25, §71.73.b.2).

_____ 1-3

4. Repair, replacement or upgrading of malfunctioning on-lot sewage systems. (Reference-Title 25, §71.21.a.4.iv) through:

a. Aggressive pro-active enforcement of ordinances which require operation and maintenance and prohibit malfunctioning systems. (Reference-Title 25, §71.73.b.5).

b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.

_____ 1-3

5. Establishment of joint municipal sewage management programs. (Reference-Title 25, §71.73.b.8).

_____ 1-3

6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities. (Reference-Title 25, §71.71).

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		G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference-Title 25, §71.21.a.4).
		1. Modification of existing comprehensive plans involving:
<u>N/A</u>		a. Land use designations. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		b. Densities. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		c. Municipal ordinances and regulations. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		d. Improved enforcement. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		e. Protection of drinking water sources. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		3. Alternatives for creating or changing municipal subdivision regulations to assure long-term use of on-site sewage disposal which consider lot sizes and protection of replacement areas. (Reference-Title 25, §71.21.a.4).
<u>N/A</u>		4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference-Title 25, §71.21.a.4).
		H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference-Title 25, §71.21.a.4).
<u>1-3</u>		1. Water Quality/Public Health. (Reference-Title 25, §71.21.a.4).
<u>1-3</u>		2. Growth potential (residential, commercial, industrial). (Reference-Title 25, §71.21.a.4).
<u>1-3</u>		3. Community economic conditions. (Reference-Title 25, §71.21.a.4).
<u>1-3</u>		4. Recreational opportunities. (Reference-Title 25, §71.21.a.4).
<u>1-3</u>		5. Drinking water sources. (Reference-Title 25, §71.21.a.4).
<u>1-3</u>		6. Other environmental concerns. (Reference-Title 25, §71.21.a.4).

VI. Evaluation of Alternatives

	A. Technically feasible alternatives identified in Section V of this check-list must be evaluated for consistency with respect to the following: (Reference-Title 25, §71.21.a.5.i.A).
<u>N/A</u>	1. Applicable plans developed and approved under Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act (33 U.S.C.A. 1288). (Reference-Title 25, §71.21.a.5.i.A). Appendix B, Section II.A of the Planning Guide.

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N/A

2. Municipal wasteload management plans developed under PA Code, Title 25, Chapter 94. (Reference-Title 25, §71.21.a.5.i.B). The municipality's recent Wasteload Management (Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide.

N/A

3. Plans developed under Title II of the Clean Water Act (33 U.S.C.A. 1281-1299) or Titles II and VI of the Water Quality Act of 1987 (33 U.S.C.A. 1251-1376). (Reference-Title 25, §71.21.a.5.i.C). Appendix B, Section II.E of the Planning Guide.

N/A

4. Comprehensive plans developed under the Pennsylvania Municipalities Planning Code. (Reference-Title 25, §71.21.a.5.i.D). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide.

N/A

5. Antidegradation requirements as contained in PA Code, Title 25, Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference-Title 25, §71.21.a.5.i.E). Appendix B, Section II.F of the Planning Guide.

N/A

6. State Water Plans developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference-Title 25, §71.21.a.5.i.F). Appendix B, Section II.C of the Planning Guide.

N/A

7. Pennsylvania Prime Agricultural Land Policy contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference-Title 25, §71.21.a.5.i.G). Appendix B, Section II.G of the Planning Guide.

N/A

8. County Stormwater Management Plans approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference-Title 25, §71.21.a.5.i.H). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide.

N/A

9. Using wetland mapping developed under Section II.A.7, identify and discuss mitigative measures including the need to obtain permits for any encroachments on wetlands from the construction or operation of any proposed wastewater facilities. Appendix B, Section II.I of the Planning Guide.

IX-7

10. Protection of rare, endangered or threatened plant and animal species as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference-Title 25, §71.21.a.5.i.J). Provide the department with a copy of the completed Request For PNDI Search document. Also provide a copy of the response letter from the Department of Conservation and Natural Resources' Bureau of Forestry regarding the findings of the PNDI search. Appendix B, II.J.

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11. Historical and archaeological resource protection under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Museum Commission. (Reference-Title 25, §71.21.a.5.i.K). Provide the department with a completed copy of a Cultural Resource Notice request to the Bureau of Historic Preservation (BHP) to provide a listing of known historical sites and potential impacts on known archaeological and historical sites. Also provide a copy of the response letter from the BHP. Appendix B, Section II.K of the Planning Guide.

IX-3, IX-4,
IX-5

- B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference-Title 25, §71.21.a.5.ii). Appendix B of the Planning Guide.

13-20

- C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference-Title 25, §71.21.a.5.iii).

N/A

- D. Provide cost estimates using present worth analysis for construction, financing, on going administration, operation and maintenance and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of plan submission. (Reference-Title 25, §71.21.a.5.iv).

20-21

- E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of the plan submission. (Reference-Title 25, §71.21.a.5.v).
- F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference-Title 25, §71.21.a.5.vi).

19

1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of sewage management programs. (Reference-Title 25, §71.21.a.5.vi.A).

17-19

2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a sewage management program justifying time schedules for each phase. (Reference-Title 25, §71.21.a.5.vi.B).

X-12, X-13c,
X-18

- G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D.).

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VII. Institutional Evaluation

- A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:

N/A

1. Financial and debt status. (Reference-Title 25, §71.61.d.2).

N/A

2. Available staff and administrative resources. (Reference-Title 25, §71.61.d.2).

3. Existing legal authority to:

N/A

- a. Implement wastewater planning recommendations. (Reference-Title 25, §71.61.d.2).

N/A

- b. Implement system-wide operation and maintenance activities. (Reference-Title 25, §71.61.d.2).

N/A

- c. Set user fees and take purchasing actions. (Reference-Title 25, §71.61.d.2).

N/A

- d. Take enforcement actions against ordinance violators. (Reference-Title 25, §71.61.d.2).

N/A

- e. Negotiate agreements with other parties. (Reference-Title 25, §71.61.d.2).

N/A

- f. Raise capital for construction and operation and maintenance of facilities. (Reference-Title 25, §71.61.d.2).

- B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:

13-19

1. Need for new municipal departments or municipal authorities. (Reference-Title 25, §71.61.d.2).

13-19

2. Functions of existing and proposed organizations (sewer authorities, on-lot maintenance agencies, etc.). (Reference-Title 25, §71.61.d.2).

13-19

3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference-Title 25, §71.61.d.2).

- C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:

N/A

1. Incorporation of authorities or agencies. (Reference-Title 25, §71.61.d.2).

X-18

2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference-Title 25, §71.61.d.2).

N/A

3. Description of activities to provide rights-of-way, easements and land transfers. (Reference-Title 25, §71.61.d.2).

N/A

4. Adoption of other municipal sewage facilities plans. (Reference-Title 25, §71.61.d.2).

N/A

5. Any other legal documents. (Reference-Title 25, §71.61.d.2).

X-14, X-17

6. Dates or timeframes for items 1-5 above on the project's implementation schedule.

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|-------------------|---------------|---|
| <u> </u> | <u>17, 19</u> | D. Identify the proposed institutional alternative for implementing the chosen technical wastewater disposal alternative. Provide justification for choosing the specific institutional alternative considering administrative issues, organizational needs and enabling legal authority. (Reference-Title 25, §71.61.d.2). |
|-------------------|---------------|---|

VIII. Justification for Selected Technical & Institutional Alternatives

- | | | |
|-------------------|---------------|---|
| | | A. Identify the technical wastewater disposal alternative which best meets the wastewater treatment needs of each study area of the municipality. Justify the choice by providing documentation which shows that it is the best alternative based on: |
| <u> </u> | <u>17, 19</u> | 1. Existing wastewater disposal needs. (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>17, 19</u> | 2. Future wastewater disposal needs. (5 and 10 years growth areas). (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>17, 19</u> | 3. Operation and maintenance considerations. (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>17, 19</u> | 4. Cost-effectiveness. (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>17, 19</u> | 5. Available management and administrative systems. (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>17, 19</u> | 6. Available financing methods. (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>17, 19</u> | 7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference-Title 25, §71.21.a.6). |
| <u> </u> | <u>20-21</u> | B. Designate and describe the capital financing plan chosen to implement the selected alternative(s). Designate and describe the chosen back-up financing plan. |



Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428
September 21, 2000

Southeast Regional Office

(610) 832-6130
Fax: (610) 832-6133

Mr. William A. Rosenberry, Manager
Willistown Township
688 Sugartown Road
Malvern, PA 19355-3302

Re: Act 537 - Plan of Study
Willistown Township
Chester County

Dear Mr. Rosenberry:

We have completed our review of your municipality's proposed plan of study, as prepared by your engineer, Yerkes Associates, dated April 27, 2000.

The proposed plan of study intends to focus on the following:

1. Determine the immediate, short, and long-term needs for improved sewage facilities for the entire Township. Emphasis will be given to the northwest quadrant of the Township, the Jaffrey Way and Laurel Circle areas;
2. Evaluation of structural alternatives to serve the study area, including but not limited to connection to the Valley Forge Sewer Authority treatment facilities, connection to the East Goshen Township treatment facilities, and continuation of existing on-lot sewage disposal systems, and community land application facility.
3. Evaluation of institutional alternatives for the proper operation and maintenance of a comprehensive Township wide Sewage Management Program for all on-lot sewage disposal systems, community systems, PUC systems, and public systems.

Approval of this proposed plan of study is hereby granted. The estimated cost of the plan is \$35,000.00.

Please note, however, that this does not constitute a final action by the Department until you submit the completed plan to us and we have acted upon it consistent with PA Code Title 25, Chapter 71.

EXHIBIT IX-9

1 of 2



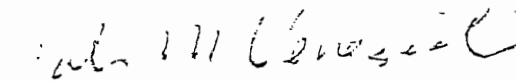
Mr. Rosenberry, Manager

-2-

September 21, 2000

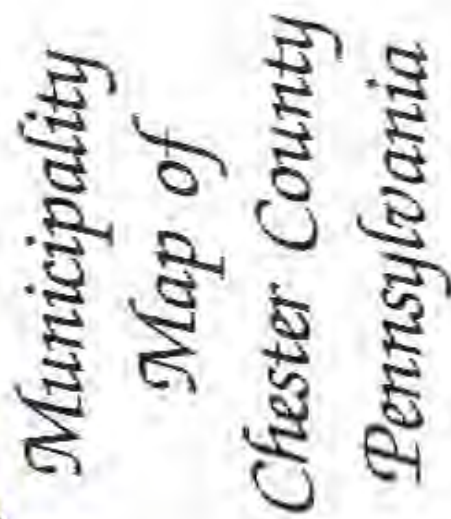
If you have any questions, please contact me at the above number.

Sincerely,



John M. Veneziale
Sewage Planning Specialist II
Water Management

cc: Chester County Planning Commission
Chester County Health Department
Yerkes Associates, Inc.
Planning Section
Re 30










ZONING DISTRICTS

RU	RURAL DISTRICTS
RA	RESIDENCE DISTRICTS
RA-1	RESIDENCE DISTRICTS
R-1	RESIDENCE DISTRICTS
R-2	RESIDENCE DISTRICTS
R-3	RESIDENCE DISTRICTS
O	OFFICE DISTRICTS
M	MULTIFAMILY DISTRICTS
HB	HIGHWAY BUSINESS DISTRICTS
OP	OFFICE-PROFESSIONAL DISTRICTS
I	RESTRICTED INDUSTRIAL DISTRICT
PHC	PLANNED HIGHWAY CORRIDOR DISTRICT
PPC	PAOLI PIKE CORRIDOR DISTRICT

YERKES ASSOCIATES, INC.
1444 PHOENIXVILLE PIKE * P.O. BOX 1558 * WEST CHESTER, PA 19380 * (610) 644-4234
CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
SITE PLANNERS SURVEYORS

M - MULTIFAMILY DISTRICTS

	DISTRICT AREA	UNITS/ ACRE	MIN. LOT SIZE
	M-1	12	5 AC.
	M-2	6	3 AC.
	M-3	12	2 AC.
	M-4	6	20 AC.
	M-5	6	4 AC.
	M-6	1.5-3	20 AC.
	M-7	6	10 AC.

MALVERN BOROUGH

TREDYFFRIN TOWNSHIP

EASTTOWN TOWNSHIP

EAST GOSHEN TOWNSHIP

EAST GOSHEN TOWNSHIP

WESTTOWN TOWNSHIP

DELAWARE COUNTY

ACT 537 - -EXHIBIT 2

WILLISTOWN TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

YERKES ASSOCIATES, INC.

1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254

CONSULTING ENGINEERS

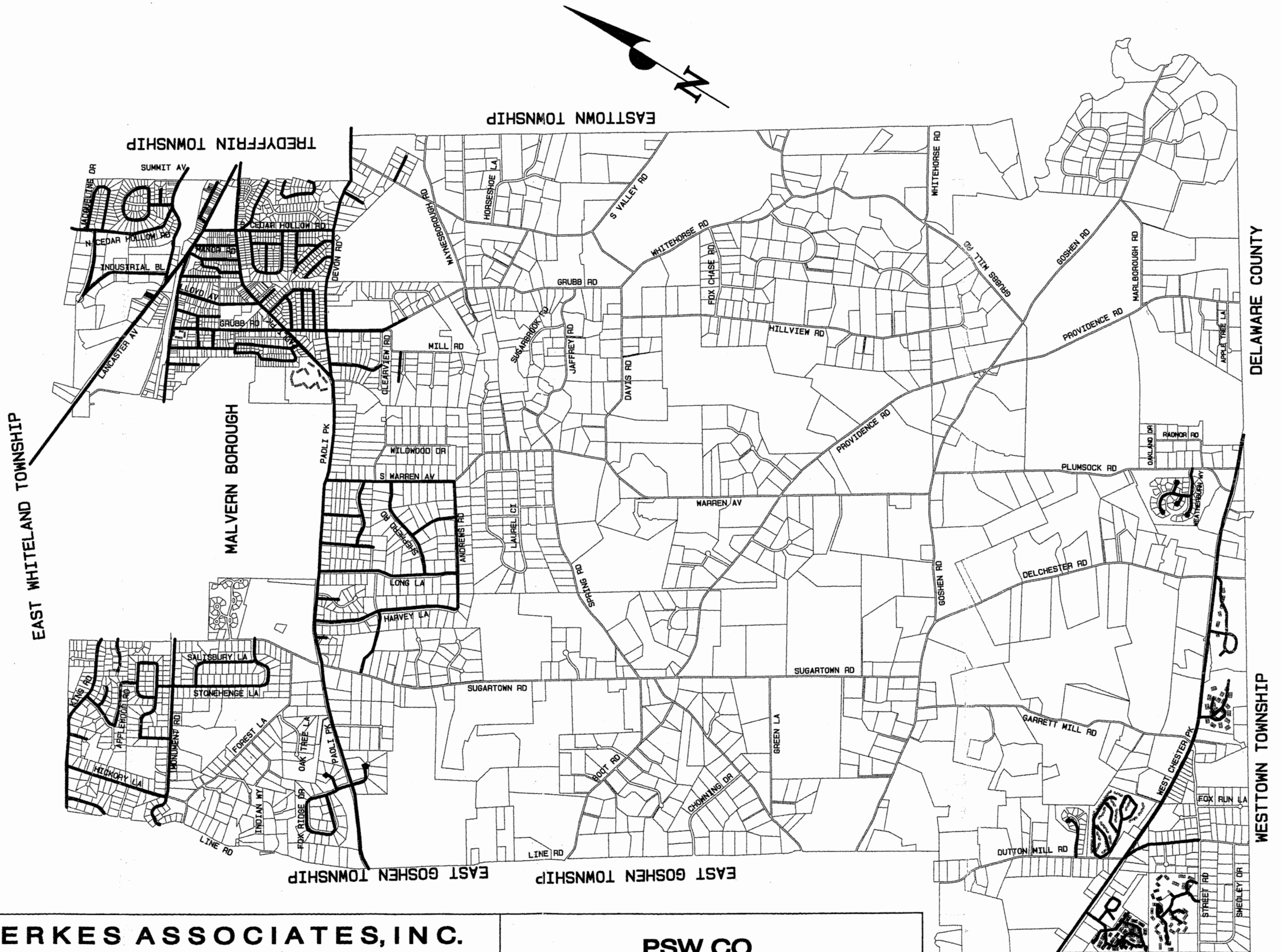
SITE PLANNERS

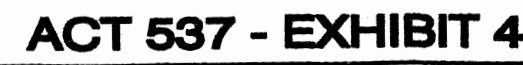
LANDSCAPE ARCHITECTS

SURVEYORS

**PSW CO.
PUBLIC WATER
SERVICE AREA**

ACT 537 - -EXHIBIT 3





SUMMARY
ON-SITE SEWAGE SYSTEM SURVEY RESULTS
WILLISTOWN TOWNSHIP
CHESTER COUNTY

OLDEST HOME	200 YEARS
NEWEST HOME	2 YEARS
OLDEST SYSTEM	90 YEARS
NEWEST SYSTEM	3 MONTHS
WANT PUBLIC SEWER	38
DON'T WANT PUBLIC SEWER	6
PROBLEMS WITH EXISTING SYSTEM	48
WELL CONTAMINATED	10
RECENT (15 YEARS OR LESS) REPAIRS/REPLACEMENTS*	33
REPLACEMENTS REQUIRING SAND MOUNDS	5

**WILLISTOWN TOWNSHIP
ON-SITE SYSTEM SEWAGE SYSTEM SURVEY**

539 SURVEYS MAILED

Some respondents indicated problems with the well water that were mechanical in nature. These have been marked with an asterisk.

368 RETURNED

69% RESPONSE

NORTHWEST QUADRANT

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	TYPE OF SEWAGE SYSTEM							HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
							HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW						
ALLYSA CIR	6	3	8	10	N	N							Community	N	occasional odor	N	n/a	n/a	WANT PUBLIC SEWER
			5	10	N	N							Community	N		N	n/a	n/a	
			3	10	N	N							Community	N		N	n/a	n/a	
APPLEWOOD	23	16	26	28	N	N		X					N	Y		N	Y	every 3 mos	1 WASHLOAD PER DAY -MORE FILLS SYSTEM - HOW SOON FOR PUBLIC SEWER
			23	23	N	N		X			X		N	N		N	Y	1995	SYS WILL ULTIMATELY FAIL - WLD LIKE PUBLIC; 2 NEIGHBORS HAD TO HAVE NEW SYS TO SELL HOMES
			13	13	N	N		X			X		N	N		N	Y	2 YRS	
			23	23	N	N		X			X		N	N		N	Y	1/YEAR	
			10.5	10.5	N	N		X			X		N	N		N	Y	2-4 YRS	
			17	17	N	N		X			X		N	N		N	Y	every 5 YRS	WORKS FINE
			18	18	N	N		X			X		N	N		N	Y	1/2YRS	WORKS FINE
			16	16	N	N		X			X		N	Y		N	Y	1/2 YRS	JUST PASSABLE WHEN MOVED IN; NO PROB NOW BUT WANT PUBLIC SEWER
			23	23	N	N		X			X		N	N		N	Y	1/2 YRS	WORKS FINE
			24	24	N	N		X			X		N	N		N	Y	1/2 YRS	WORKS FINE
			25	25	N	N		X			X		N	N		N	Y	1/4 YRS	WORKS FINE
			23	23	N	N		X			X		N	N		N	Y	2-3 YRS	WORKS FINE
			22	22	N	N		X			X		N	N		N	Y	1/6 YRS	RECENTLY SOLD PROPERTY
			23	23	N	N		X			X		N	N		N	Y	12-18 MOS	WORKS FINE
			22	22	N	N		X			X		N	N		N	Y	1/YR	FREQ ODORS IN APPLEWOOD & STONEHENGE AREAS - WANT PUBLIC SEWER
			22	?	N	N		X			X		N	N		N	Y	1-2 YRS	WORKS FINE
BERRYWOOD RD	8	3	30	30	N	N		X					N	Y		N	Y	1/YR +	HOW WILL IT AFFECT THE SALE OF THE PROPERTY
			28	28	N	N		X			X		N	N		N	Y	2-3 YRS	WORKS FINE
			30	30	N	N		X			X		N	N		N	Y	2-3 YRS	WORKS FINE
CLOVER LN	20	16	33	33	N	N		X			X		N	N		N	Y	1/YR	WORKS FINE
			50	50	N	N		X			X		N	N		N	Y	1/YR	"WE WOULD FEEL BETTER WITH PUBLIC SEWERS"
			40	40	N	N		X			X		N	N		N	Y	3-4 YRS	WORKS FINE

EXHIBIT 5b

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			37	37	N	N		X	X		X			N	Y	N	Y	1/2 YRS	HAD A PROBLEM UNTIL DRAIN FIELD INSTALLED
			30	1	N	N		X			X			N	N	N			
			35	10	N	N	X	X			X			Y	N	N	Y	2 X YR	DOES NOT WANT PUBLIC SEWERS
			40	4	N	N						X		Y	N	N	Y	2 YRS	SHOULD BE ONPUBLIC; ALL RE-SALES REQ NEW SYSTEMS
			35	9	N	N		X			X			N	N	N	Y	1991	WORKS FINE
			40	15-17	N	N		X	X		X			N	N	N	Y	1994	WORKS FINE
			37	37	N	N		X			X			N	N	N	Y	2-3 YRS	WORKS FINE
			40	12	N	N		X	X		X			N	N	N	Y	2 YRS	WORKS FINE
			45	45	N	N		X			X			N	Y	N	Y	FREQ	FILLS UP FREQ; HAS PUMPED EACH MONTH SOMETIMES
			35	NEW	N	N		X			X			Y	N	N	NEW		NEW SYSTEM
			40	40	N	N		X			X			N	Y	N	Y	EV 6 MOS	STRONG ODORS; ESP AFTER SHOWERS, LAUNDRY, ETC.
			35	35	N	N		X	X		X			N	Y	N	Y	3 YRS	PAST PROBLEM - DRAIN FIELD INSTALLED 20 YEARS AGO
			35	35	N	N		X	X		X			N	Y	N	Y	2 YRS	CESSPOOL DOESN'T DRAIN WELL & BACKS UP SEPTIC TANK DAILY
COURT RUN	3	2	20	20	Y	Y*		X						Y	N	N	Y	6 MOS	WANTS PUBLIC SEWER
			18	18	Y	N		X						N	N	N	Y	3 YRS	WELL HAS EXCESSIVE IRON & SULPHUR
DRUID LN	5	3	27	27	N	N		X			X			?	N	N	Y	2 YRS	NEW DRAIN FIELD IN 1980; "EMPTY NESTERS"
			30	30	N	N		X						N	?	N	Y	2 YRS	BLOCKED LINE TO DRAIN FIELD REPLACED
			30	9 MOS	N	N		X			X			Y	N	N	Y	3 YRS	SYSTEM FAILED HYDRAULIC LOAD TEST & HAD TO BE REPLACED
FARM HOUSE LN	5	4	24	24	N	N		X						N	N	N	Y	1990	BROKEN PIPE FROM HOUSE TO SYSTEM REPLACED
			113	13	N	N		X						N	N	N	Y	2-3 YRS	
			25	25	N	N			X		X			N	N	?	Y	1990	
			23	23	N	N	X	X			X			Y	Y	N	Y	4-5 YRS	REPLACED SEPTIC SYSTEM PUMP
FOREST LN	28	19	50	50	Y	N			X					N	N	?	N	-	
			32	32	Y	N		X			X			N	Y	N	Y	2 YRS	TREE ROOTS CLOG PIPE; WANT PUBLIC SEWERS
			43	43	Y	N		X						N	N	N	Y	1	
			45	45	Y	Y*	X	X			X			N	Y	Y	Y	1 YR	WE;;- BACTERIA LEVEL HIGH, BELIEVE FROM SEPTIC SYSTEM
			35	35	Y	N			X					N	N	N	N	-	
			3	3	Y	N		X			X			Y	N	N	N	NEW SYST	
			40	40	Y	N		X			X			?	N	N	Y	1998	
			-	-	Y	N			X		X			N	N	N	Y	2.5 YRS	WORKS FINE
			3	3	Y	N		X			X			Y	N	N	N	NEW SYST	WORKS FINE
			HOUSE UNDER CONSTRUCTION																

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			30	30	Y	Y*		X	X					N	N	N	Y	2.5 YRS	IF HOUSE ENLARGED, WILL NEED NEW DRAINFIELD
			50	10	Y	N	X				X			Y	N	N	Y	YEARLY	HAVE A HOLDING TANK FOR SOLIDS
			40	40	Y	N			X		X			N	N	Y	N	-	WORKS FINE
			50	50	Y	Y*			X					N	Y	Y	Y	1 YR	BROWN WELL WATER; SEPTIC SYSTEM BACKS UPS
			35	35	Y	Y*		X						?	Y	N	N	N	LOW WELL WATER SUPPLY; SEPTIC CLOGS
			45	45	Y	N	X	X						N	N	N	Y	YRLY	HOUSE SITS BACK FROM ROAD; FEELS PUBLIC WOULD BE COSTLY
			90	90	Y	Y*	X	X	X					N	?	N	Y	YRLY	PREFER PUBLIC SEWER
			6	6	Y	N	X	X	X		X			N	N	N	Y	1999	WORKS FINE
			7	7	Y	Y*		X			X			Y	Y	N	Y	2 YRS	WELL WATER MUDDY; DRAIN FIELD PLUGS UP - WANT PUBLIC SEWER
FOUR WINDS LN	16	14	20	20	N	N	X	X			X			N	N	N	Y	1990	WANT PUBLIC SEWER
			23	23	N	N		XX			XX			N	N	N	Y	2 YRS	HAD TO INSTALL SECOND SYSTEM
			80	80	N	N			X					N	N	N	Y	2 YRS	WORKS FINE
			22	22	N	N		X						N	N	N	Y	3 IN 20 YRS	WORKS FINE
			22	22	N	N		X						N	N	N	Y	2 YRS	
			23	23	N	N		X						N	N	N	Y	2 YRS	WORKS FINE
			22	22	N	N					X			N	N	N	Y	2-3 YRS	
			24	24	N	N		X						N	N	N	Y	4 YRS	ARE THERE PLANS FOR PUBLIC SEWERS?
			22	22	N	N		X						N	N	N	Y	2 YRS	WORKS FINE
			23	23	N	N		X						N	N	N	Y	2 YRS	WORKS FINE
			21	21	N	N		X			X			N	N	N	Y	2 YRS	WORKS FINE
			22	22	N	N		X						N	N	N	Y	1-2 YRS	
			30	30	N	N		X						N	Y	N	Y	2 YRS	DRAIN FIELD SINKING
			22	22	N	N		X						N	Y	N	Y	2 YRS	
FOX RIDGE DR	21	12	10	10	N	N		COMMUNITY SYSTEM						Y	Y/N	N	?	?	WANT PUBLIC IF IT DOESN'T INCREASE DEVELOPMENT
			10	10	N	N		COMMUNITY SYSTEM						Y	Y	N	?	?	POOR DRAINAGE OF TOILETS
			8	10	N	N		COMMUNITY SYSTEM						Y	N	N	N	?	SYSTEM OFTEN SMELLS
			10	10	N	N		COMMUNITY SYSTEM						?	N	N			SMELLS BAD; WANT PUBLIC CONNECTION
			4		N	N		COMMUNITY SYSTEM						Y	N	N	Y	?	WOULD LIKE TO CONNECT TO MUNICIPAL SYSTEM AND HAVE FUNDS TO DO SO
			5.5	10	N	N		COMMUNITY SYSTEM						Y	Y	N	N		STRONG ODOR IN THE EVENINGS, SMELLS LIKE ROTTEN EGGS; TOILETS ALWAYS CLOG
			8	8	N	N		COMMUNITY SYSTEM							?	N	N		
			8.5	12	N	N		COMMUNITY SYSTEM						Y	Y	N	Y	ROUTINELY	ODOR A PROBLEM IN A.M & P.M.; ADDED A CHARCOAL SYSTEM - DIDN'T HELP
			3	3	N	N		COMMUNITY SYSTEM						?	?	?	?	?	
			8	10-12	N	N		COMMUNITY SYSTEM						Y	Y	N	?	?	OCCASIONAL ODORS; WOULD LIKE TO SEE COMMUNITY SYSTEM TIED TO PUBLIC SEWER

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			7	12	N	N		COMMUNITY SYSTEM						Y	Y	N	Y	ROUTINELY	PERIODICALLY NEED REPAIR/REPLACED; ALWAYS A SEWER ODOR; AT TIMES CAN'T GO OUT
			8	12	N	N		COMMUNITY SYSTEM						Y	Y	?	Y	WEEKLY	CONSTANT BAD SMELL; CONCERNED ABOUT SMELL & LIFE OF SYSTEM
FRIARS HEEL	1	1	14	14	Y	N							X	N	N	N	Y	2 YRS	WORKS FINE
GINGERWOOD RD	7	4	30	30	N	N		X						?	Y	N	N		FAILED PERC TEST & NEEDS OTHER WORK - WANT COST OF PUBLIC CONNECTION
			19	19	N	N		X			X			?	N	N	Y	4-5 YRS	WORKS FINE
			35	35	N	N		X						N	N	N	Y	YRLY	WANT PUBLIC SEWERS
			30	30	N	N		X						N	N	N	Y	2 YRS	
HARMONY CIR	5	5	15	15	N	N		X						N	N	N	Y	?	
			13	13	N	N		X			X			N	N	N	Y	?	NEW OWNER - WANT PUBLIC SEWER INFORMATION
			10	10	N	N		X			X			N	N	N	N		
			12	12	N	N		X			X			N	Y	N	Y	YRLY	DRAIN FIELD OCCASIONALLY OVERFULL
			14	14	N	N		X			X			N	N	N	N		
HICKORY LN	23	18	20	20	Y	N		X			X			N	N	N	Y	2-3 YRS	WORKS FINE
			34	34	N	N		X	X					N	N	N	Y	1 IN 8 YRS	WORKS FINE
			44	44	Y	N		X	X					N	N	N	Y	3 IN 32 YRS	WORKS FINE
			40	8	Y	N					X			N	N	N	N		WORKS FINE
			50	50	Y	N		X	X		X			N	N	N	Y	3-4 YRS	
		?	16	16	Y	N	X				X			N	N	N	Y	2 YRS	WANT SEWERS IF NOT TOO EXPENSIVE
			32	32	Y	Y		X						N	N	N	Y	YRLY	WELL HIGH IRON CONTENT & RUSTY RED SEDIMENT
			35	35	N	N		X	X		X			N	N	N	Y	YRLY	
			42	4	Y	Y*					X			N	N	Y	N		WORKS FINE
			37	37	Y	N		X	X					?	N	N	Y	3 YRS	WORKS FINE
			30	30	N	N		X	X					N	N	N	Y	2-3 YRS	WORKS FINE
			35	35	N	N		X						?	N	N	N		
			20	20	Y	N		X			X			N	N	N	Y	2 YRS	
			12	12	N	N		X			X			N	N	N	N		WORKS FINE
			35	35	N	N		X						?	N	N	Y	3-4 YRS	
			34	34	N	N		X						N	Y	N	Y	Aug-00	POOR DRAINAGE
			42	42	Y	N							X	N	N	N	Y	1996	WORKS FINE
			7	7	N	N		X			X			N	N	N	Y	2-3 YRS	
HOLLY LN	9	6	50	50	Y	N			X					N	N	Y	Y	2 YRS	NOT OPPOSED TO PUBLIC SEWERS
			40	?	Y	Y*		X	X		X			Y	?	N	Y	YRLY	
			?	?	Y	N	X	X						N	N	N	Y	3-4 YRS	WORKS FINE
			40	40	Y	N		X			X			N	Y	N	Y	3-4 X YR	SEPTIC TANK OVERFLOWS TO DRAIN FIELD IN WET YRS; WELL DRIED UP SEVL Xs

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			40	40	Y	N		X	X					?	N	N	Y	2 X YR	
INDIAN WAY	10	8	51	51	Y	N						X		N	N	N	N		WORKS FINE
			20	20	Y	N		X			X			N	N	N	Y	1990	
			50	7	Y	N		X			X			N	N	N	Y	YRLY	
			20	1	Y	N	?	X			X			N	N	N	N		WORKS FINE
			48	6	Y	Y*	XX	XX			XX			N	WITH OLD SYS	N	Y	YRLY	WORKS FINE
			50	50					X		X			N	N	Y	Y	2	WORKS FINE
			50	2	Y	N		X						N	N	N	Y	YRLY	
			25	1	Y	N		X						?	N	N	N	2 YRS	
JOANNA DR	9	7	18	18	N	N		X			X			N	Y	N	Y	YRLY	WET SPOTS IN DRAIN FIELD; ENTIRE CUL-DE-SAC HAS NEW DRAIN FIELDS OR NEED TO
			17	7.5	N	N		X						N	Y	N	Y	2 YRS	DOES NOT WANT PUBLIC SEWERS
			17	17	N	N		X						Y	N	N	Y	3-4 YRS	WORKS FINE
			18	3	N	N		X						Y	N	N	Y	YRLY	WORKS FINE
			18	18	N	N	X	X			X			Y	Y	N	Y	2 X YR	WET GROUND; CAN'T DRY' HIGH WATER TABLE
			20	20	N	N		X			X			N	N	N	Y	2 YRS	
			17	17	N	N		X			X			N	Y	N	Y	2 X YR	CRACKED PIPE UNDER FRONT YD & DRIVEWAY; SMELL IN & OUT OF HOUSE
W KING RD	1	1	22	22	N	N		X	X		X			Y		N	Y	21 YRS	WORKS FINE
LINE RD	22	13	27	27	Y	N		X			X			N	N	N	Y	YRLY	DOES NOT WANT PUBLIC SEWERS
			35	35	Y	N					X			N	N	N	N		WORKS FINE
			35	35	N	N		X			X			N	Y*	Y	Y	2-3 YRS	WASHING MACHINE DRAINS TO SEPARATE DISPOSAL FIELD
			36	36	N	N		X	X					N	Y*	N	Y	2 YRS	
			34	34	N	N		X	X		X			N	Y	?	Y	6 MOS	FREQUENT PUMPING WHEN IT RAINS
			35	35	N	N		X	X		X			N	?	?	Y	2 YRS	HAS QUESTIONS
			14	14	Y	N						X		Y	Y*	N	Y	2 YRS	WORKS FINE
			35	35	N	N		X	X		X			N	?	N	Y	YRLY	OCCASIONAL CESSPOOL & FIELD BACK-UP
			14	14	Y	N					X			Y	N	N	Y	2 YRS	SURFACE MOISTURE ON DRAIN FIELD EVERY COUPLE OF YEARS
			37	37	N	N		X			X			N	N	N	Y	2 YRS	CONCERN WITH OTHERS IN NEIGHBORHOOD
			35	35	Y	N							X	Y	N	N	N		
			40	?	N	N							X	?	N	?	Y	2000	
MONUMENT RD	38	32	40	7	N	N		X			X			Y	Y*	N	Y	2 YRS	CESSPOOL REPLACED W TANK & DRAINFIELD IN 1992
			32	32	Y	N		X						?	N	N	N	2 YRS	WORKS FINE
			40	1	N	N		X			X			Y	N	N	N	NEW SYST	
			16	16	N	N		X			X			N	Y	N	Y	2 WKS	DRAINFIELD FAILED 6 YEARS AGO - WANT PUBLIC SEWERS

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			90	1 Y	Y*	X	X				X			Y	N	N	Y	YRLY	WORKS FINE
			39	39 N	N		X	X			X			N	Y	N	Y	2 YRS	CESSPOOL OVERFLOWS WHEN MULTIPLE WATER SOURCES USED
			5	5 Y	Y*		X							N	N	N	Y	2 YRS	WORKS FINE
			45	45 N	N		X	X						N	N	N	Y	2 YRS	WORKS FINE
			6	6 Y	N		X							?	N	N	N		WORKS FINE
			200	39 Y	N	X	X				X			N	Y	N	Y	2 YRS	OVERFLOWS WITH 6 PEOPLE IN HOUSE - O.K. WITH 2
			20	20 Y	N	X					X			Y	N	N	Y	2 YRS	WORKS FINE
			5	5 Y	N		X							Y	N	N	Y	YRLY	WORKS FINE NOW BUT KNOW WILL HAVE PROBLEMS
			15	15 Y	N		X				X			N	N	N	Y	5 YRS	WORKS FINE
			40	40 N	N	X	X				X			N	N	N	Y	3 YRS	
			182	?	N	N		X			X			N	N	N	N		WORKS FINE
			50	50 Y	Y*	?	X				X			N	N	N	Y	2 YRS	WORKS FINE
			35	?	N	N		X			X			N	Y	N	Y	2 YRS	SYSTEM DIDN'T PASS "PERC" TEST FOR RE-SALE
			68	68 Y	N		X							N	N	N	N		WORKS FINE
			1	1 Y	N	?	X				X			?	N	N	N	NEW SYST	
			35	35 N	N		X							N	N	N	Y	3 YRS	WORKS FINE
			55	55 Y	N		X							?	N	N	Y	2 YRS	WORKS FINE
			40	40 N	N		X	X						N	Y	N	Y	3 YRS	POOR DRAINAGE - WANTS PUBLIC SEWERS
			50	50 N	N			X			X				N	Y	Y	5 YRS	DOES NOT WANT PUBLIC SEWERS
			50	?	N	N		X			X	X		Y	N	N	Y	3 YRS	WORKS FINE
			38	13 N	N		X				X			N	N	N	Y	2 YRS	WORKS FINE
			45	45 N	N		X							N	Y	N	Y	YRLY	WANTS PUBLIC SEWER
			?	30 N	N	X	X							N	N	N	Y	2 YRS	WORKS FINE
			40	40 Y	N			X						N	N	N	Y	3 YRS	WORKS FINE
OAK TREE LN	11	15	40	40 Y	Y*		X				X			N	N	N	Y	YRLY	WORKS FINE
			43	43 Y	Y		X					X		N	N	Y	Y	YRLY	WELL HAS FECAL COLIFORM CONTAMINATION
			45	45 Y	N			X						N	N	N	Y	4-5 YRS	
			42	?	Y	N		X	X		X			Y	N	N	Y	YRLY	WORKS FINE
			40	5 Y	N	X	X				X			Y	N	N	Y	YRLY	WORKS FINE
			37	37 Y	N		X	X				X		N	N	N	Y	2 IN 37 YRS	WORKS FINE
			35	35 Y	N		X	X						N	N	N	Y	5 YRS	WORKS FINE
			40	40 Y	N		X				X			N	N	N	Y	2-3 YRS	WORKS FINE
PAOLI PIKE		7	50	50 Y				X						Y	Y	N	Y	YRLY	OCCASIONAL SYSTEM PROBLEMS
			180	20-40 Y	N		X				X			N	N	N	Y	YRLY	WORKS FINE
			50	50 Y	N		X	X						N	N	N	Y	3 YRS	

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			18	18	Y	N		X			X			N	N	N	Y	YRLY	PREFER PUBLIC SEWER
			50	50	Y	N		X			X			N	N	N	Y	YRLY	PREFER PUBLIC SEWER
			296	?	Y	N		X						N	Y	N	Y	?	HAS CONCERNS BUT DIDN'T WRITE THEM ON SURVEY
			4	20	Y*	N		X			X			N	?	N	N		NO CONCERNS BUT WANTS PUBLIC SEWER
PICKWICK LN	23	17	35	35	N	N	X	X			X			N	N	N	Y	2 YRS	WORKS FINE
			29	29	N	N	X	X	Cesspool		X			N	N	N	Y		WORKS FINE
			30	30	N	N		X	X		X			N	N	N	Y	5 YRS	WORKS FINE
			35	35	N	N		X	X					N	N	N	Y	2 YRS	WORKS FINE
			16	16	N	N		X			X			N	N	N	Y	YRLY	WORKS FINE
			34	34	N	N		X	X					N	N	N	Y	2-3 YRS	NEW DRAIN FIELDS IN 1978
			33	10	N	N		X			X			N	N	N	Y	2 YRS	
			40	40	N	N		X						N	N	N	Y	3 YRS	WORKS FINE
			15	15	N	N		X			X			N	Y	N	Y	3YRS	WORKS FINE
			30	30	N	N		X			X			N	N	N	Y	2-3 YRS	SATURATED CESSPOOL; CONCERNED WITH AGE OF SYSTEM
			40		N	N	X		X					N		N	Y	3 YRS	WORKS FINE
			30	30	N	N		X			X			N	N	N	Y	2 YRS	WORKS FINE
			35	35	N	N		X	X					N	N	N	Y	YRLY	WORKS FINE
			28	28	N	N		X			X			N	N	N	Y	8-10 YRS	
QUARTERWOOD RD	4	4	28	28	Y	N		X						N	N	N	Y	YRLY	WORKS FINE
			27	27	Y	Y		X			X			N	N	N	Y	2 YRS	WELL HAS BEEN CONTAMINATED; SEPTIC WORKS FINE
			27	27	Y	N		X			X			N	Y	N	Y	YRLY	CONCERNS ON HOW LONG SYSTEM WILL LAST
			27	27	Y	N	X	X						N	N	N	Y	2 YRS	
ROBIN RD	5	5	20	4	N	N						X		Y	N	N	Y	YRLY	
			25	25	N	N		X						N	Y	N	Y	3 X YEAR	WANT PUBLIC SEWER
			22	22	N	N		X			X			N	N	N	Y	8 YRS	WORKS FINE
			27	27	N	N		X			X			N	Y	?	Y		WET YARD FROM POOR DRAINAGE
			24	24	N	N		X						N	N	N	Y	2 YRS	
ROSEWOOD CIR	4	3	30	30	N	N		X						N	N	N	Y	3 YRS	WORKS FINE
			30	30	N	N		X						N	N	N	Y	8-10 YRS	WORKS FINE
			25	25	N	N		X			X			N	Y	N	Y	+ 1 X YR	BACK-UP IN RAINEY OR HEAVY SNOW - WANT PUBLIC SEWERS
SALISBURY LN	22	16	34	34	N	N		X	X		X			N	Y	N	Y	1981	REPLACED PIPES IN 1981 - WORKS FINE
			39	39	N	N		X	X				X	N	N	N	Y	1.5 YRS	WORKS FINE
			40	40	N	N		X	X		X			N	N	N	Y	1999	HAS QUESTIONS ON WHETHER PUBLIC SEWER COMING

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			32	32	N	N		X	X					N	Y	Y	Y	2 YRS	SLOW DRAINAGE; SYSTEM IS FAILING - NO REPLACEMENT AREA
			40	40	N	N		X			X			N	Y	N	Y	FREQ	SYSTEM FILLS WITH HEAVY RAIN
			40	1.5	N	N		X						Y	Y	N	Y	2 YRS	REPLACED CESSPOOL WITH SEPTIC TANK 1 1/2 YEARS AGO
			35	35	N	N							X	N	N	N	Y	2 YRS	WORKS FINE
			40	40	N	N		X				X		N	N	?	Y	1.5 YRS	NEIGHBORS HAVING PROBLEMS
			39	39	N	N		X	X					N	Y*	N	Y	YRLY	WORKS FINE
			40	40	N	N		X			X			?		N	Y	YRLY	
			36	36	N	N		X			X			N	N	N	Y	3-4 YRS	WORKS FINE
			40	40	N	N		X						N	Y	N	Y	2 X YR	WANT PUBLIC SEWER
			28	4	N	N	X	X			X			?	N	N	Y	5 YRS	WORKS FINE
			45	45	N	N		X						N	N	N	Y	2 YRS	WORKS FINE
			40	40	N	N		X			X			N	N	N	Y	1988	PUMPED WHEN PIPES WERE CLOGGED AND RE-PLACED
			38	2	N	N		X			X			Y	N	N	Y	YRLY	WORKS FINE
SKYLINE DR	6	3	43	43	Y	N							X	?	N	N	Y	5 YRS	WORKS FINE
			50	30	Y	N		X			X			N	N	N	Y	1970	WORKS FINE
			45	45	Y	N			X					N	Y*	N	Y	1996	PUMPED IN 1996 ONLY BECAUSE OF BROKEN PIPE
STONEHENGE LN	35	28	40	40	N	N	X	X	X		X			N	N	N	Y	YRLY	WORKS FINE
			40	40	N	N		X	X					N	N	N	Y		WORKS FINE - HOUSE IS FOR SALE - INSPECTION WILL REVEAL PROBLEMS
			35	35	N	N		X			X			N	N	N	Y	5 YRS	WANT PUBLIC SEWER
			40	40	N	N		X			X			N	N	N	Y	5 YRS	WORKS FINE
			38	38	N	N		X			X			N	N	N	Y	2 YRS	WORKS FINE
			37		N	N	X	X			X			N	N	N	Y	4-5 YRS	WANT PUBLIC SEWER
			35	3	N	N		X			X			Y	N	N	N		NEW SYSTEM
			36	36	N	N		X	X					?		N	Y	YRLY	WANT PUBLIC SEWER
			36	36	N	N		X	X					N	Y	N	Y	2 YRS	PROBLEMS AFTER HEAVY RAIN
			34	34	N	N		X	X					N	N	N	Y	3-5 YRS	WORKS NORMALLY
			35	20	N	N		X			X			N	N	N	Y	YRLY	
			39	39	N	N			X		X			N	N	N	N		
			40	40	N	N		X			X			N	Y	Y	Y	YRLY	SYSTEM FAILING - SOIL WON'T PERC FOR NEW FIELD
			40	40	N	N							X	N	N	N	N		WORKS FINE
			35	35	N	N		X	X					N	Y	N	Y	9-12 MOS	SYSTEM OUTDATED
			40	40	N	N	X	X			X			N	N	N	Y	5 + YEARS	DOESN'T WANT PUBLIC
			37	37	N	N		X	X		X			N	Y	N	Y	YRLY	
			40	1	N	N						X		Y	N	N	Y	1999	WANT TO KNOW WHEN PUBLIC SEWERS WILL COME

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			40		N	N		X	X							N	Y	YRLY	WORKS FINE
			40	40	N	N		X	X		X			N	N	N	Y	3 YRS	NO OBJECTIONS TO PUBLIC SEWER
			?	?	N	N	X	X		X				N	N	?	Y	YRLY	WORKS FINE
			40	5-7	N	N	X	X			X			Y	N	N	Y	4 YRS	WORKS FINE
			38	38	N	N		X	X		X			N	N	N	Y	3 YRS	
			40	3	N	N			X					?	N	N	N	NEW SYSTEM	
			37	37	N	N		X	X		X			N		N	Y	1999	SELDOM PUMP; PERC NOT GOOD IN AREA
			40	40	N	N		X	X		X			N	Y	N	Y	YRLY	BACK-UP INTO HOUSE IN RAINY WEATHER; LIMIT FLUSHING AND LAUNDRY
			40	20	N	N						X		N	N	N	Y	2 YRS	WORKS FINE
			40	40	N	N		X	X					N	N	N	Y	3 YRS	WORKS FINE
SUGARTOWN RD	30	21	123	?	Y	N							X	N	N				WORKS FINE
																			ENTIRE SUGARTOWN RD AREA HAS ALWAYS HAD PROBLEMS - UPGRADE A MUST
			37	?	N	N		X						N	N	N	Y	3 YRS	WORKS FINE
			30	2	N	N		X			X			Y	N	N	Y		NEW SYSTEM
			50	?	N	N			X					N	N	N	Y	YRLY	WORKS FINE
			50	50	N	N		X			X			N	?	N			PREFER PUBLIC SEWER
			35	35	N	N		X	X					N	N	?	Y	1.5 YRS	IF NEED REPLACEMENT WILL GET A SAND MOUND - POOR DRAINAGE
			?	?	N	N								Y	N	N			
			43	43	Y	N		X						N	N	N	Y	?	WORKS FINE
			40	40	N	N		X	X					N	N	N	Y	7 YRS	
			26	26	Y	N	X	X			X			Y	N?	N	Y	2 YRS	QUESTIONS HOW LONG SYSTEM WILL LAST
			50	50	Y	N		X						Y	N	N	Y	3 YRS	WORKS FINE
			50	50	N	N			X					N	N	N	Y	YRLY	
			20	20	N	N		X			X			N	N	N	Y	2 YRS	WORKS FINE
			45	45	N	N		X	X					N	N	N	N		NOT PUMPED IN 15 YEARS
			35	?	N	N							X	N	N	N			WORKS FINE
			33	33	N	N		X				X		Y	N	N	Y	2 YRS	WORKS FINE
			60	50	Y	N			X					N	N	N	Y	Jun-00	WORKS FINE
			28	28	Y	N		X			X			N	N	N	Y	3 YRS	WORKS FINE
			55	55	N	N							X	N	N	N	N		WORKS FINE
			43	43	N	N		X						N	Y	N	Y	2 YRS	SYSTEM BACKS UP
TIBURON LN	7	5	18	18	Y	N		X			X			N	N	N	Y	2 IN 5 YRS	WORKS FINE
			17	17	Y	N		X			X			Y	N	N	Y	1 IN 7 YRS	WORKS FINE
			200	5	Y	N		X			X			Y	Y*	N	Y	2 YRS	WORKS FINE

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			200	5	Y	N		X			X			Y	Y	N	Y	2 YRS	TILE FIELD REPLACED IN 1995
			19	19	Y	N					X			N	N	N	Y	2 YRS	
WOODLND DR	8	12	15	15	Y	N	X				X			N	N	N	Y	3 YRS	
			40	40	Y	N		X	X					N	N	N	Y	5 YRS	WORKS FINE
			45	45	Y	N			X					N	N	N	Y	3 IN 45 YRS	
			55	55	Y	N	X							N	N	N	Y	3 YRS	
			25	25	Y	N		X			X			N	N	N	Y	YRLY	WORKS FINE
			50	50	Y	N			X					N	N	N	Y	YRLY	WORKS FINE
			50	50	Y	N		X			X			N	N	N	Y	7 YRS	PUMP WHEN NEEDED
WOODMONT	7		35	35	N	N		X	X					N	Y*	N	Y	5 YRS	WANT PUBLIC SEWER
			36	36	N	N		X	X					N	N	N	Y	2-3 YRS	WORKS FINE
			35	35	N	N		X			X			N	N	N	Y	2 YRS	
			40	1	N	N		X	X		X			Y	Y*	N	Y	YRLY	NEW SYSTEMS; PROBLEMS WITH OLD- DOESN'T WANT PUBLIC
			36	36	N	N		X	X					N	Y	N	Y	2 YRS	ADDED 2ND PIT YEARS AGO - SYSTEM NOW WORKS FINE

EAST CENTRAL II

HILLDALE RD	6	6	43	?	Y	N			X		X			?	N	?	Y	2 X YR	WELL HAS BACTERIA - WANTS PUBLIC SEWER
			27	3	Y	Y		X			X			Y	N	N	Y	Y	WORKS FINE
			50	10	Y	N	X	X			X			N	N	N	Y	2 Y	WORKS FINE
			45	?	Y	Y					X			N	N	?	N		WILL NEED TO PUMP DRAINFIELD - WELL HAD BACTERIA
			10	10	Y	N						X		Y	?	?	Y	2 Y	NEW OWNER
			47	47	Y	Y		XX			X			N	Y	N	Y	3-4 MOS	CHILDREN GONE - BACTERIA IN WELL - WANT SEWERS
JAFFREY RD	22	15	35	2.5	Y	N						X		Y	N	Y	Y	2-3 YRS	WORKS FINE - NEW SYSTEM
			20	20	Y	N		X			X			?	N	?	Y	3 IN 20 YRS	
			20	?	Y	N						X		N	N	N	Y	Y	WORKS FINE
			45	3	Y	N		X			X			Y	N	N	N		WORKS FINE
			70	?	Y	N	X	X			X			?	N	N	N		WORKS FINE
			55	55	Y	N			X		X			N	Y	N	Y	7 YRS	CESSPOOL FILLS
			6	6	Y	N					X			Y	N	N	N		
			22	22	Y	N					X			Y	Y	N	Y	EV 6 MOS	SYSTEM WON'T DRAIN - NEED PUBLIC
			10	10	Y	N					X			Y	N	N	Y	3 YRS	

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DON'T KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			25	25	Y	N					X			N	N	N	N		NEW SYSTEM
			17	17	Y	N		X						N	N	Y	Y	1 IN 9 YRS	WORKS FINE
			NEW CONSTRUCTION IN PROGRESS																
			41	3	Y	N					X			N	N	N	N		
			20	20	Y	N		X						N	N	N	Y	May-00	WORKS FINE
			2	2	Y	Y		X						Y	?	?	N		NEW SYSTEM - PUMPED TO PROPERTY 150 YDS AWAY
LNUREL CIR	40	29	36	36	Y	N		X	X					N	N	N	Y	1991	
			40	40	Y	N			X		X			N	N	Y	Y	2 YRS	PREFER PUBLIC SEWER
			40	40	Y	Y			X		X			N	N?	N	Y	1999	POSSIBLE DRAINFIELD FAILURE - LIVED IN HOME ONLY 1.5 YEARS
			45	?	Y	N		X						N	Y	N	Y	2-3 YRS	SYSTEM OVERFLOWED
			48	48	Y	N			X			X		?	N	N	Y	30 YRS AGO	WORKS FINE
			45	45	Y	N		X			X			N	Y	N	Y	1.5 YRS	SYSTEM SEEMS TO E DIMINISHING
			38	38	Y	N		X	X		X			N	N	N	Y	1 IN 38 YRS	WORKS FINE
			50	?	Y	N	X	X						N	Y	Y	Y	2 MOS	WANT PUBLIC - FREQUENT PUMPING IN RAINY WEATHER
			45	45	Y	N							X	N	N	N	Y	1 IN 10 YRS	WORKS FINE
			45	45	Y	N			X					N	N	N	N		WORKS FINE
			50	50	Y	Y		X	X		X			N	N	N	Y	1980	WELL HAS TURBIDITY
			45	45	Y	Y		X						N	Y	Y	Y	YRLY	WELL HAS LOW CAPACITY - SEPTIC HAS LOW CAPACITY - WANT PUBLIC SEWER
			43	43	Y	Y		X	X		X			N	Y	N	Y	3 YRS	WELL HAS BACTERIA COUNT - SEPTIC REPAIRED IN 1997
			45	45	Y	N			X		X			N	N	N	Y	3 YRS	WORKS FINE
			40	40	Y	N		X			X			N	N	Y	N		WORKS FINE
			35	35	Y	Y	X	X						Y	?	?	Y	YRLY	WELL CONTAMINATED WITH E COLI & BACTERIA - ODOR FROM NEIGHBOR'S SYSTEMS
			20	20	Y	Y*					X			N	N	N	Y	2 YRS	WORKS FINE
			45	45	Y	N			X					N	N	N	N		WORKS FINE
			47	47	Y	N			X					N	N	N	N		WORKS FINE
			50	?	Y	N			X					N	N	N	Y	Aug-00	WILL BE SELLING HOME SOON - NEEDS TO KNOW ABOUT PUBLIC SEWERS
			42	42	Y	N		X	X		X			N	N	N	Y	2 IN 42 YRS	WORKS FINE
			42	42	Y	N							X	?	N	N	Y	1998	NEW OWNER
			43	43	Y	N			X		X			N	N	N	N	2 IN 43 YRS	WORKS FINE
			50	NEW	Y	N			X					N	Y	N	Y	NEW	SYSTEM FAILED - NEW SYSTEM INSTALLED 7/31/00
			46	?	Y	N		X						N	N	N			WORKS FINE
			20	20	Y	N		X			X			N	N		Y	2 YRS	DON'T WANT PUBLIC SEWER

STREET	# UNITS	# RESPONSES	AGE OF HOME	AGE OF SYSTEM	HAVE A WELL	PROBLEMS WITH WELL	HOLDING TANK	SEPTIC TANK	CESSPOOL	AEROBIC	DRAINFIELD	SAND MOUND	DONT KNOW	HAVE A PUMP	PROBLEMS WITH SYSTEM	LINE NOT TO SEWER	SYSTEM PUMPED	HOW OFTEN	COMMENTS OR CONCERNS
			45	45 Y		Y			X		X			N	Y	N	Y	YRLY	DON'T DRINK FROM WELL BEC IS 200' FROM CESSPOOL; SEPTIC HAS BLOCKAGES - WANTS PUBLIC WATER FIRST
			50	50 Y		N		X						N	N	N	Y	2 YRS	
			43	43 Y		N		X			X			N	Y	N	Y	?	POOR DRAINAGE
		2	32	32 Y		N		X			X			N	N	?	Y	YRLY	WORKS FINE
SUGAR BROOK LN	5		20?	Y		N		X		X				N	N	N	Y	2 YRS	NEEDS PUBLIC SEWER

July 20, 2000

Act 537 Sewerage Facilities

On-Site System Sewage System Survey

Please complete the survey form and return it to the township office in the enclosed envelope.

Street name Hilldale Rd (Or) Block Number _____

Approximate Age of Home 43

Approximate Age of Sewage System NO clue

Do you have well water? Yes ✓ No _____

Have you ever had any problems with your well? Yes X No _____

If "yes" to above, please explain.

BACTERIA IN WATER / PUT A SYSTEM
IN TO FIX IT

Please indicate the type of Sewage System (check all that apply):

Holding tank _____ Septic tank _____ Cesspool X Aerobic System _____

Drain Field X Sand Mound _____ Do not know _____

Does your sewage system have a pump? Yes _____ No _____ DONT KNOW

Do you or have you had problems with your Sewage System?

Yes _____ No X Do not know _____ If "yes", please describe:

Do you have any dishwasher, washing machine or other plumbing line that does not discharge directly to your sewage system?

Yes _____ No _____ Do not know X

Have you ever had your sewage system pumped out? Yes X

No _____ If "yes", when _____

How often AT LEAST TWICE A YEAR

Do you have any concerns or questions regarding your system?

Yes X No _____ Everything works fine _____

If "yes", please explain: IT IS VERY OLD. ALL THE SYSTEMS
IN LAUREL CIRCLE ARE TOO OLD. AND
PROBABLY LEACHING IN TO THE CREEKS
Bring in Sewers.!!

EXHIBIT 5c

AREAS DEPICTED IN WHITE ARE GENERALLY SUITABLE SOILS



GENERALLY MARGINAL SOILS



GENERALLY UNSUITABLE SOILS



YERKES ASSOCIATES, INC.

1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * 610-644-4254

CONSULTING ENGINEERS

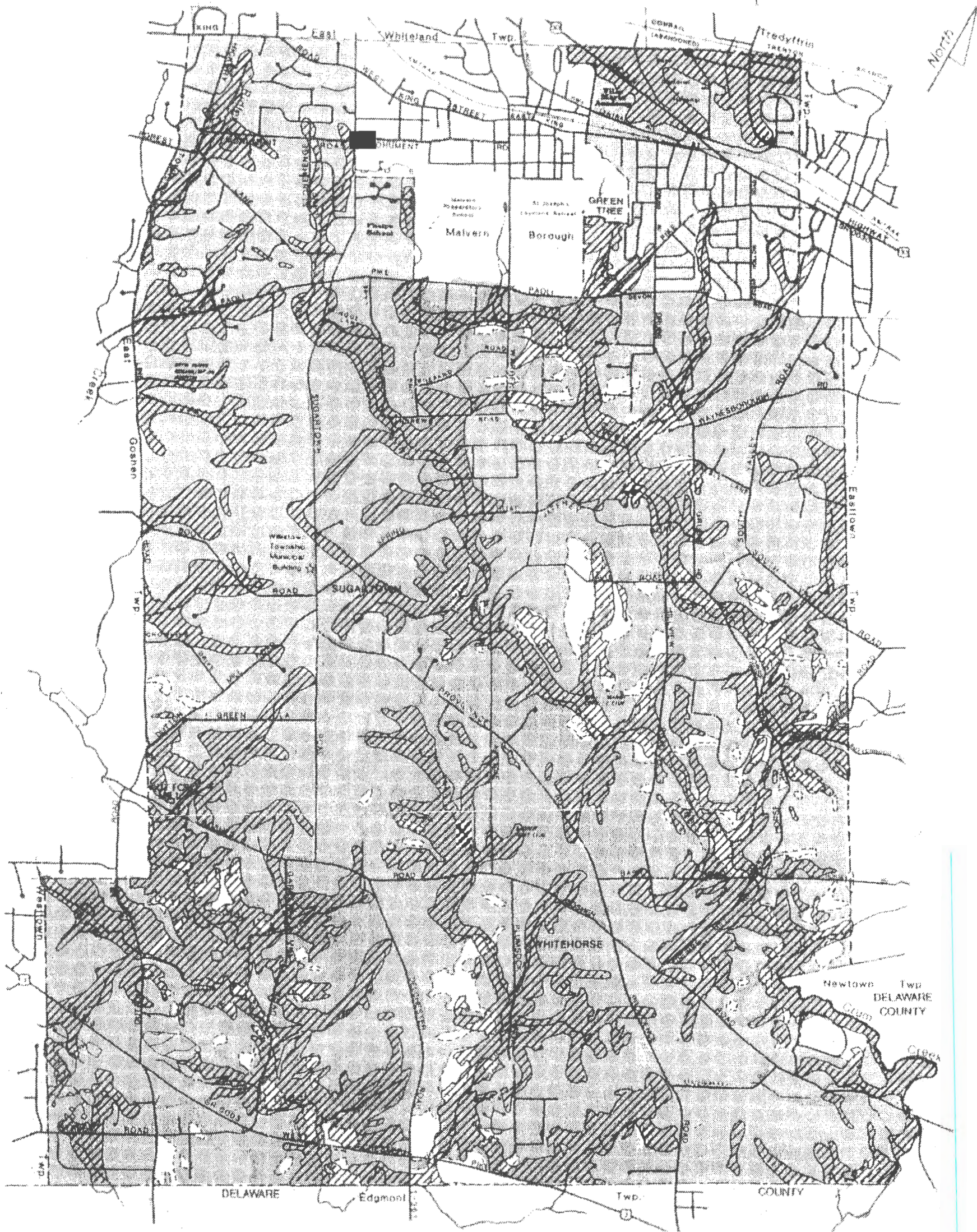
LANDSCAPE ARCHITECTS

SITE PLANNERS

SURVEYORS

EXHIBIT 6

**Willistown Township
Chester County
ACT 537 Plan
SOILS EXHIBIT**



Notes: Base map prepared by Yerkes Assoc. Inc.,
December 1991, updated January 1996 by
Brandywine Conservancy

0 800 1600 2400 3200
FOOT FEET



Environmental Management Center
Brandywine Conservancy
P.O. Box 141
Chadds Ford, PA 19317

WILLISTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA



Critical Resources

- Steep Slopes Over 15%
- Flood Plains
- Wetlands
- Hydric Soils



Sensitive Resources

- Class I or II Prime Agricultural Soils
- Other Wooded Areas
- Other Headwaters Areas
- Scenic Areas

Map 3 : Environmental Constraints



EXISTING PUBLIC SEWER AREAS

INDEX TO NUMBERED STREETS

- 1-ARLINGTON AVENUE T-508
- 2-DUFFRYN AVENUE T-510
- 3-GREEN TREE LANE T-631
- 4-FIRST AVENUE T-405
- 5-SECOND AVENUE T-403
- 6-THIRD AVENUE T-510
- 7-LINDEN LANE T-632
- 8-SANDY LANE T-630
- 9-CRUMLEY AVENUE T-516
- 10-LLOYD AVENUE T-520
- 11-BERYL ROAD T-608
- 12-WOODLAND AVENUE T-602
- 13-FRAZER AVENUE T-680
- 14-FAIRVIEW ROAD T-611
- 15-MORELAND ROAD T-524
- 16-MANOR ROAD T-613
- 17-QUEENS AVENUE T-647
- 18-BEVERLY AVENUE T-640
- 19-BYRON AVENUE T-641
- 20-GABLE ROAD T-609
- 21-LYNBROOK ROAD T-612
- 22-SYCAMORE CIRCLE T-614
- 23-SPRUCE LANE a)T-614 b)T-615
- 24-PINE TREE ROAD T-616
- 25-DEVON CIRCLE
- 26-RICHMOND ROAD T-634
- 27-WISTAR ROAD T-403
- 28-CHETWYND ROAD a)T-682 b)T-671
- 29-COBBLESTONE DRIVE T-663

EASTERN/TOWNSHIP LINE

51 EXISTING EDU
67 FUTURE EDU

NORTHWEST AREA

446 EXISTING EDU
92 FUTURE EDU

WEST CENTRAL AREA

42 EXISTING EDU
130 FUTURE EDU

EAST CENTRAL AREA

245 EXISTING EDU
47 FUTURE EDU

VACANT PARCEL ANALYSIS

WILLISTOWN TOWNSHIP, CHESTER CO., PA.

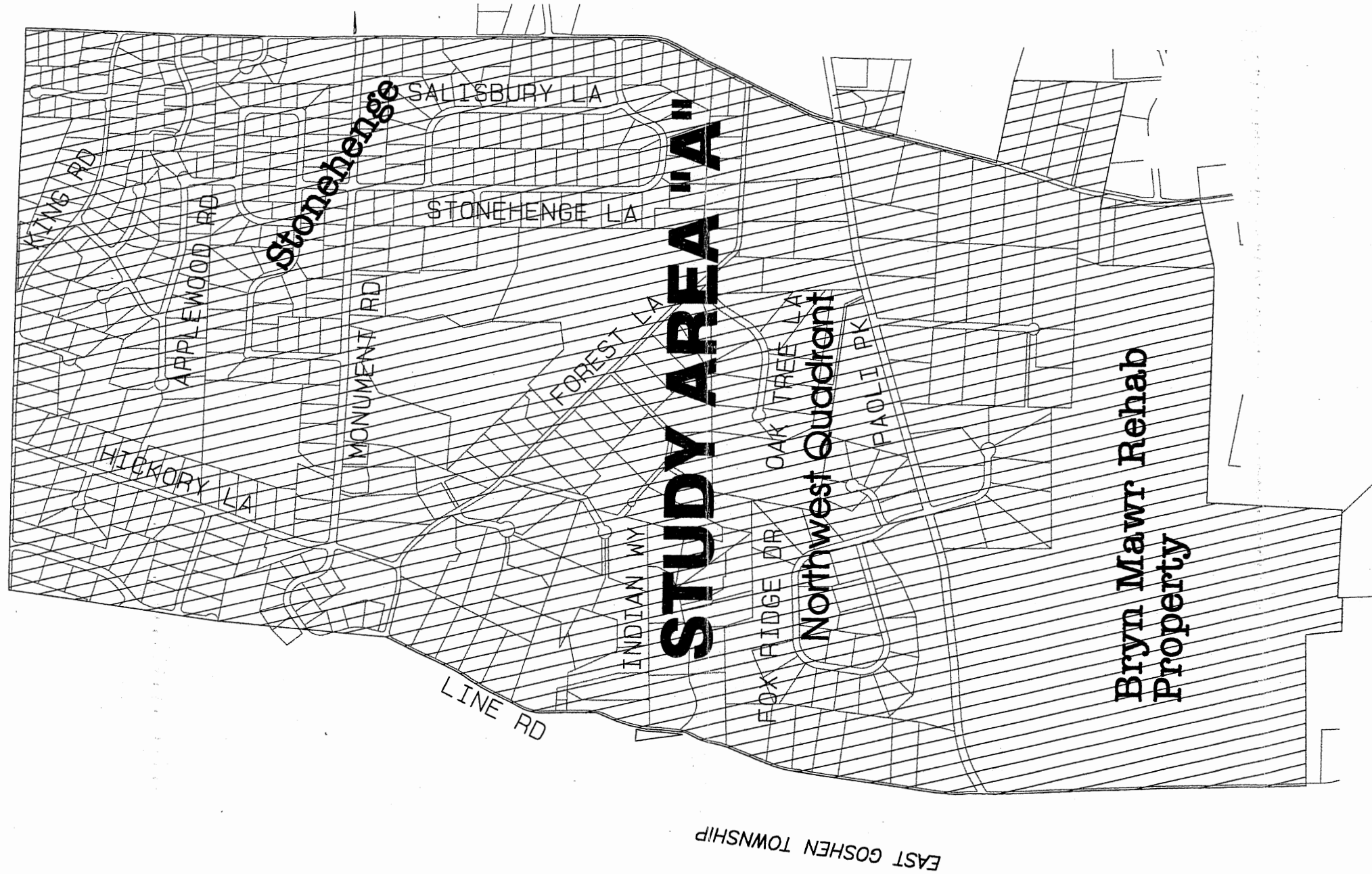
DATE: JANUARY 19, 1996

SCALE: 1" = 1,800'

YERKES ASSOCIATES, INC.
1444 PHOENIXVILLE PIKE
WEST CHESTER, PA. 19380

WILLISTOWN TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA



YERKES ASSOCIATES, INC.

1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254

CONSULTING ENGINEERS

SITE PLANNERS

LANDSCAPE ARCHITECTS

SURVEYORS

NORTHWEST QUADRANT STUDY AREA

STUDY AREA "A"

ACT 537 - EXHIBIT 9a

WILLISTOWN TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

YERKES ASSOCIATES, INC.

1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254

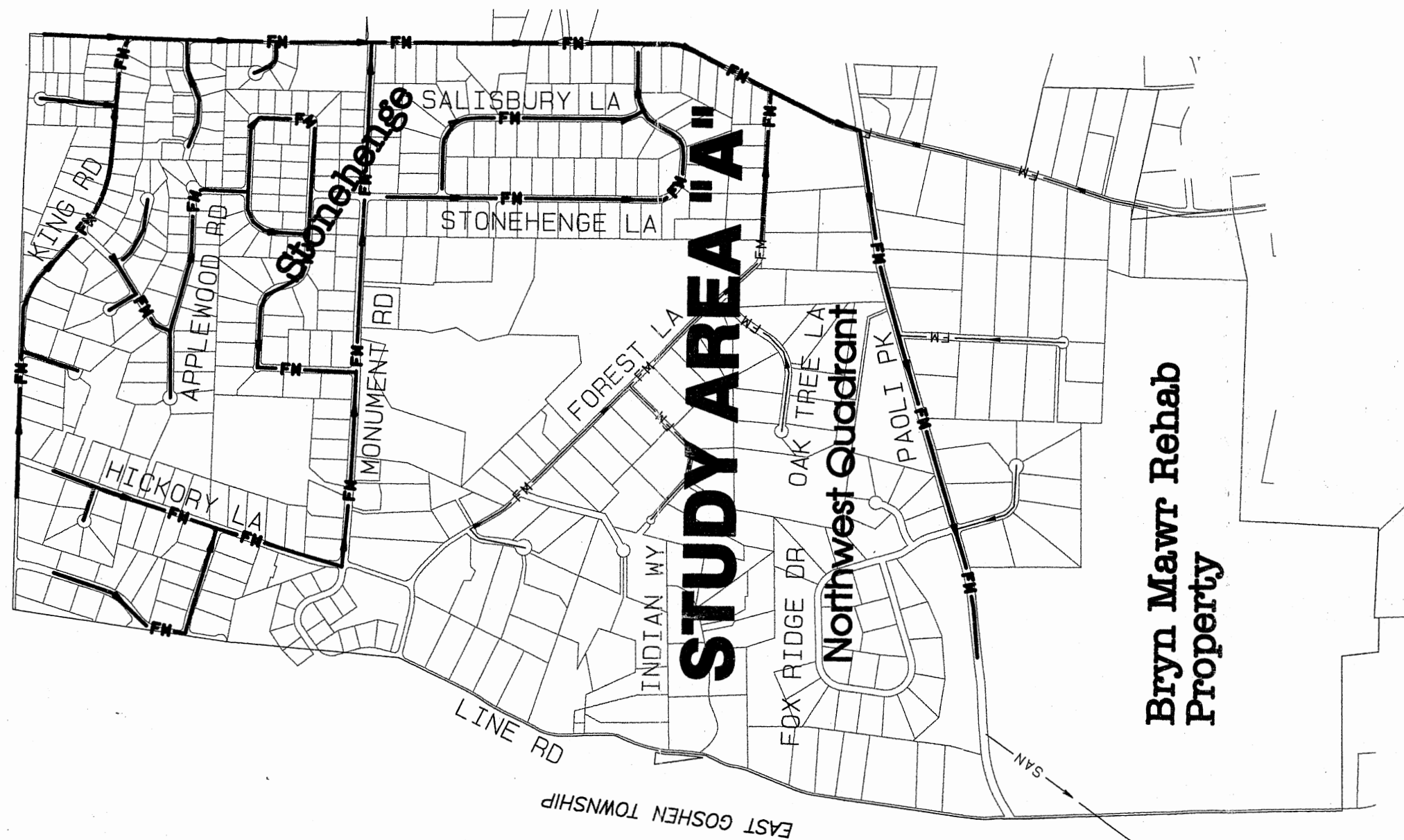
CONSULTING ENGINEERS

LANDSCAPE ARCHITECTS

SITE PLANNERS

SURVEYORS

**NORTHWEST QUADRANT
PROPOSED CONCEPT OF
SEWER INSTALLATION**



LEGEND

- SAN — GRAVITY SEWER
- FM — PRESSURE SEWER- IMMEDIATE INSTALLATION
- FM — PRESSURE SEWER- AS NEEDED INSTALLATION

NOTE: NO PUMP STATIONS ARE SHOWN ON THIS PLAN BUT HAVE BEEN INCLUDED IN COST ESTIMATES. FINAL DETERMINATION TO BE MADE AFTER SURVEY COMPLETE

ACT 537 - EXHIBIT 9b

STUDY AREA "A"



Stephen J. Di Orio, CLU, Agent
Auto-Life-Health-Home and Business
512 W. Lancaster Avenue
Wayne, PA 19087

Office: 610-687-3223 Fax: 610-971-9138 STEPHEN.DIORIO.BUS7@STATEFARM.COM

August 21, 2000

Ms. Marie D. Clevenger
Director, Utility Administration
East Goshen Township
Board of Supervisors
1580 Paoli Pike
West Chester, PA 19380-6199

Dear Ms. Clevenger:

Thank you very much for your letter of 8/17/00 advising of the Municipal Authority's permission to increase the sewage treatment plant's discharge limit to 750,000 gallons per day.

The Fox Ridge Farm Homeowner's Association is very interested in connecting to the East Goshen Township Sewer System at the earliest possible date. Please let me know when you would like to get together to discuss the details further. My home phone number is 610-647-0278 and my work phone number is 610-687-3223. My home address is 29 Fox Ridge Drive, Malvern, PA 19355.

Thanks again for your help and follow-up. Look forward to talking to you soon.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen J. DiOrio".

Stephen J. DiOrio

cc: William Rosenberry, Township Manager, Willistown Township

EXHIBIT 10

Yerkes

Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

September 7, 2000

Rev. John G. Brunner, Pastor
Christ Memorial Lutheran Church and School
89 Line Road
Malvern, PA 19355

Re: Sanitary Sewer Disposal System

Dear Reverend Brunner:

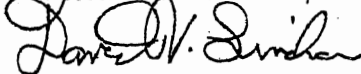
Our client, Willistown Township, is in the process of updating their official Sewage Facilities Plan (Act 537) for the entire township. Part of this planning will be to evaluate the need for public sewers in the northwest quadrant of which Christ Memorial Lutheran Church is a part.

It is our understanding that some years ago you corresponded with East Goshen Municipal Authority with regard to the possibility of connecting to those public sewer lines. When capacity was not available, you advised East Goshen Authority that extensive repairs were made to the on-lot sewage disposal system serving the church and school facilities. Our question now is whether the on-lot system is operating satisfactorily and whether you have a company that maintains the system for you.

Please reply at your earliest convenience. You can contact Sue Fish, of this office, at 610-644-4254 if you have any questions.

Very truly yours,

Yerkes Associates, Inc.



David V. Linahan, P.E.
Principal

Cc: William A. Rosenberry, Township Manager

C:\MSOffice\My Documents\Willistown\ACT 537 PLAN\church.doc



CHRIST MEMORIAL LUTHERAN
CHURCH AND SCHOOL
89 LINE ROAD, MALVERN, PA 19355

644-4508

296-0650

September 26, 2000

Yerkes Associates, Inc.
1444 Phonenixville Pike
P.O. Box 1568
West Chester, PA 19380-0078

Dear Sue fish,

Yes we are interested in tying into the public sewer system. Please contact Steve Schumm at 484- 883-4215.

Thank You

A handwritten signature in black ink, appearing to read 'Steve Schumm'. The signature is stylized with a large 'S' and a cursive 'Schumm'.

Steve Schumm
CMLCS Trustee

SEWAGE TREATMENT AGREEMENT

THIS AGREEMENT, made the 23RD day of DECEMBER, 1996 by and among **EAST GOSHEN TOWNSHIP** ("East Goshen"), **EAST GOSHEN MUNICIPAL AUTHORITY** ("East Goshen Authority") and **WILLISTOWN TOWNSHIP** ("Willistown").

WITNESSETH:

WHEREAS, Lawrence and Pamela Phillips ("Phillips") own a residence ("residence") in Willistown Township located at 59 Line Road, Malvern, PA 19533 which utilizes a on-lot sewage disposal system; and

WHEREAS, the Phillips are constructing an addition to their residence ; and

WHEREAS, the Chester County Health Department requires that the Phillips expand their existing system to service the addition; and

WHEREAS, the Chester County Health Department has determined that the Phillips' property is unsuitable for an on-lot system; and

WHEREAS, the Phillips have requested and been granted permission to connect to the East Goshen public sewer system; and

WHEREAS, the purpose of this agreement is to set forth the terms and conditions by which the sewage generated by Phillips residence shall be received and treated by East Goshen at the Ridley Creek Sewage Treatment Plant.

NOW THEREFORE, the parties hereto, each binding itself, its successors and assigns, and each representing that it has the proper legal authority to enter into this agreement, do mutually represent, covenant and agree as follows:

1. Subject to the payment of the tapping fee and inspection fee and subject also to the limitations of this agreement, East Goshen and East Goshen Authority grant Willistown the right to discharge sewage wastes from the Phillips residence at 59 Line Road, Malvern, PA into the East Goshen Sewage System for treatment. Such discharge shall be made into East Goshen's Ridley Creek sewage collection system located in East Goshen Township. No other sewage from Willistown shall be discharged into the East Goshen Sewage System. East Goshen and East Goshen Authority agree to reserve sufficient capacity in the East Goshen Sewage System to receive and treat the sewage generated by the Phillips residence.

2. East Goshen and East Goshen Authority reserve the right at any time to divert the Willistown sewage to any other treatment facility of the East Goshen Sewage System. Willistown reserves the right at any time to divert the Willistown sewage to any other treatment facility of its

system, in which event East Goshen's and East Goshen Authority's obligation to receive Willistown sewage wastes pursuant to this agreement shall terminate.

3. East Goshen shall be responsible for the maintenance and repair for the entire collection system including the portion within Willistown Township. Willistown hereby grants East Goshen and/or East Goshen Authority the right to enter upon their streets and/or easements, as necessary, in order to effect repairs or perform maintenance on the collection system. East Goshen and/or East Goshen Authority shall repair and restore all disturbed areas of land in Willistown resulting from such repairs and maintenance.

5. Willistown agrees to permit no discharges into the collection system other than domestic waste and agrees to abide by all East Goshen regulations governing the discharge of waste into the East Goshen Sewage System.

6. Willistown shall be responsible for the billing of the Phillips, their successors and assigns, for sewage service. East Goshen shall bill Willistown on a calendar quarter basis and at the regular residential sewer rental charge according to the East Goshen sewer rate ordinance for treatment of the waste generated by the residence. Payment shall be made by Willistown within 30 days of delivery of the bill.

7. Any party hereto, or its duly authorized representative, shall at all reasonable times be permitted to enter upon properties of the other for the purpose of inspection, observation, measurement, sampling and testing in order to carry out the purposes and intent of this agreement.

IN WITNESS WHEREOF, the parties have caused these presents to be executed and their respective corporate seals affixed the day and year first above written.

ATTEST:

[Signature]

EAST GOSHEN TOWNSHIP

BY: *[Signature]*

ATTEST:

[Signature]

EAST GOSHEN MUNICIPAL AUTHORITY

BY: *[Signature]*

ATTEST:

[Signature]

WILLISTOWN TOWNSHIP

BY: *[Signature]*

SEWAGE TREATMENT AGREEMENT

THIS AGREEMENT, made the 23rd day of DECEMBER, 1996 by and among EAST GOSHEN TOWNSHIP ("East Goshen"), EAST GOSHEN MUNICIPAL AUTHORITY ("East Goshen Authority") and WILLISTOWN TOWNSHIP ("Willistown").

WITNESSETH:

WHEREAS, Willow Pond is a subdivision which has been developed in East Goshen and Willistown Townships; and

WHEREAS, Willow Pond consists of 28 lots which are allocated as follows among the two townships:

East Goshen - Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14 (total of 14 lots)

Willistown - Lots 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 28 (total of 14 lots); and

WHEREAS, all of the lots in Willow Pond were previously served by and connected to a community on-lot sewage collection system (COLDS); and

WHEREAS, all of the lots in Willow Pond are presently connected to a collection system which will facilitate treatment of the Willow Pond sewage by East Goshen's Ridley Creek Treatment Plant; and

WHEREAS, the purpose of this agreement is to set forth the terms and conditions by which the sewage generated by the Willow Pond lots located in Willistown shall be received and treated by East Goshen at the Ridley Creek Sewage Treatment Plant.

NOW THEREFORE, the parties hereto, each binding itself, its successors and assigns, and each representing that it has the proper legal authority to enter into this agreement, do mutually represent, covenant and agree as follows:

1. Subject to the payment of the charges and subject also to the limitations of this agreement, East Goshen and East Goshen Authority grant Willistown the right to discharge sewage wastes from those residences on Lots 15 through 28 in Willow Pond into the East Goshen Sewage System for treatment. Such discharge shall be made into East Goshen's Ridley Creek sewage collection system located in East Goshen Township. No other sewage from Willistown shall be discharged into the East Goshen Sewage System. East Goshen and East Goshen Authority agree to reserve sufficient capacity in the East Goshen Sewage System to receive and treat the sewage generated by the said Lots 15 through 28.

2. East Goshen and East Goshen Authority reserve the right at any time to divert the Willistown sewage to any other treatment facility of the East Goshen Sewage System. Willistown reserves the right at any time to divert the Willistown sewage to any other treatment facility of its system, in which event East Goshen's and East Goshen Authority's obligation to receive Willistown sewage wastes pursuant to this agreement shall terminate.

3. Willistown shall accept dedication of that portion of the Willow Pond collection system located in Willistown Township and East Goshen shall accept dedication of that portion of the collection system in East Goshen Township.

4. East Goshen shall be responsible for the maintenance and repair for the entire collection system including the portion within Willistown Township. Willistown hereby grants East Goshen and/or East Goshen Authority the right to enter upon their streets and/or easements, as necessary, in order to effect repairs or perform maintenance on the Willow Pond collection system. East Goshen and/or East Goshen Authority shall repair and restore all disturbed areas of land in Willistown resulting from such repairs and maintenance.

5. Willistown agrees to permit no discharges into the Willow Pond collection system other than domestic waste and agrees to abide by all East Goshen regulations governing the discharge of waste into the East Goshen Sewage System.

6. Willistown shall be responsible for the billing of Willistown residents who own Lots 15 through 28 in Willow Pond for sewage service. East Goshen shall bill Willistown on a calendar quarter basis and at the regular residential sewer rental charge according to the East Goshen sewer rate ordinance for treatment of the waste generated by the owners of Lots 15 through 28 in Willow Pond. Payment shall be made by Willistown within 30 days of delivery of the bill.

7. Any party hereto, or its duly authorized representative, shall at all reasonable times be permitted to enter upon properties of the other for the purpose of inspection, observation, measurement, sampling and testing in order to carry out the purposes and intent of this agreement.

IN WITNESS WHEREOF, the parties have caused these presents to be executed and their respective corporate seals affixed the day and year first above written.

ATTEST:

EAST GOSHEN TOWNSHIP

[Signature]

BY: [Signature]

ATTEST:

EAST GOSHEN MUNICIPAL AUTHORITY

[Signature]

BY: [Signature]

ATTEST:

WILLISTOWN TOWNSHIP

[Signature]

BY: [Signature]

**WILLISTOWN TOWNSHIP
NORTHWEST QUADRANT
ESTIMATED PROJECT COSTS**

**ALTERNATIVE #3
GRAVITY SEWER**

ITEM NO.	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED QUANTITY	TOTAL AMOUNT
1	L.F.	8 inch SDR 35, PVC	\$ 55.00	41150	\$ 2,263,250
2	Each	Manholes	\$ 2,500.00	76	\$ 190,000
3	Each	Gravity Sewer Pump Stations with Generator	\$ 100,000.00	3	\$ 300,000
4	L.F.	Permanent Trench Restoration - 20 ft wide	\$ 35.00	15200	\$ 532,000
		SubTotal			\$ 3,285,250
		10% rock contingency			\$ 328,525
		30% - Legal, ROW and Engineering/Permits			\$ 985,575
		Total Estimated Project Costs			\$ 4,599,350
		# EDUs in project area	510	cost/EDU	\$ 9,018

	EDU	CONNECTIONS
SFD	339	339
BRYN MAWR	145	1
CHURCH	4	1
FOX RIDGE	22	1

	COST TO OWNER	
CONSTRUCTION COST	\$	9,018
CAPACITY FEE (275 gallons x \$11.37/gallon)	\$	3,127
TOTAL	\$	12,145

Prepared by
Yerkes Associates, Inc.
Est Proj Costs - NW QuadrantSheet2

**WILLISTOWN TOWNSHIP
NORTHWEST QUADRANT
ESTIMATED PROJECT COSTS**

**ALTERNATIVE #6
COMBINATION GRAVITY AND
PRESSURE SEWER**

ITEM NO.	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED QUANTITY	TOTAL AMOUNT
1	L.F.	2-4 inch pressure sewer	\$ 48.00	39800	\$ 1,910,400
2	EACH	1.25 inch pressure sewer laterals	\$ 125.00	432	\$ 54,000
3	L.F.	8 inch SDR 35, PVC	\$ 90.00	1350	\$ 121,500
4	Each	Manholes	\$ 2,500.00	4	\$ 10,000
5	Each	Pressure Sewer Booster Pump Stations	\$ 50,000.00	2	\$ 100,000
		SubTotal			\$ 2,195,900
		10% rock contingency			\$ 219,590
		30% - Legal, ROW and Engineering/Permits			\$ 658,770
		Total Estimated Project Costs			\$ 3,074,260
		# EDUs in project area	510	cost/EDU	\$ 6,028

	EDU	CONNECTIONS
SFD	339	339
BRYN MAWR	145	1
CHURCH	4	1
FOX RIDGE	22	1

	COST TO OWNER	
CONSTRUCTION COST	\$	6,028
CAPACITY FEE (275 gallons x \$11.37/gallon)	\$	3,127
TOTAL	\$	9,155

EAST GOSHEN MUNICIPAL AUTHORITY
EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE, WEST CHESTER, PA 19380-6199

April 17, 2001

Mr. William Rosenberry, Township Manager
Williston Township
688 Sugartown Road
Malvern Pa 19355

Re: Ridley Creek Expansion

Dear Bill:

At their meeting on April 9, 2001 the Municipal Authority authorized Yerkes Associates to proceed with the preparation of the preliminary design for the expanded Ridley Creek Sewer Plant. We need this to apply for the Part II or Construction Permit.

The cost for the additional capacity is currently estimated at \$11.37 per gallon. My best guess on the timing is we will be able to obtain the Part II Permit by the end of this year, commence construction in 2002 assuming all of the financing issues are resolved, and have the expanded plant on line in 2003.

I would stress that these figures and dates are preliminary. I will keep you advised. Please give me a call if you have any questions.

Sincerely,



Louis F. Smith, Jr.
Township Manager

F:\Data\Shared Data\Public Works Dept\Sewer\Ridley Creek\Expansion 2001\Letter to Willistown 041701.doc

**WILLISTOWN TOWNSHIP
NORTHWEST QUADRANT SEWER PROJECT
IMPLEMENTATION SCHEDULE**

Months from Township submittal of Act 537 Special Study	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DEP approval of Act 537 Plan																								
Township and East Goshen Municipal Authority develop/execute agreement for purchase of capacity																								
Prepare Part II Permit																								
Developer's Engineer Completes Design and Specifications																								
Pa DEP Review and Approve Permits																								
Township Bid Project																								
Township Open and Award Bids																								
Construction																								
Township sends "Notices to Connect"																								

WILLISTOWN TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA



STUDY AREA "B"

YERKES ASSOCIATES, INC.

1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254

CONSULTING ENGINEERS

LANDSCAPE ARCHITECTS

SITE PLANNERS

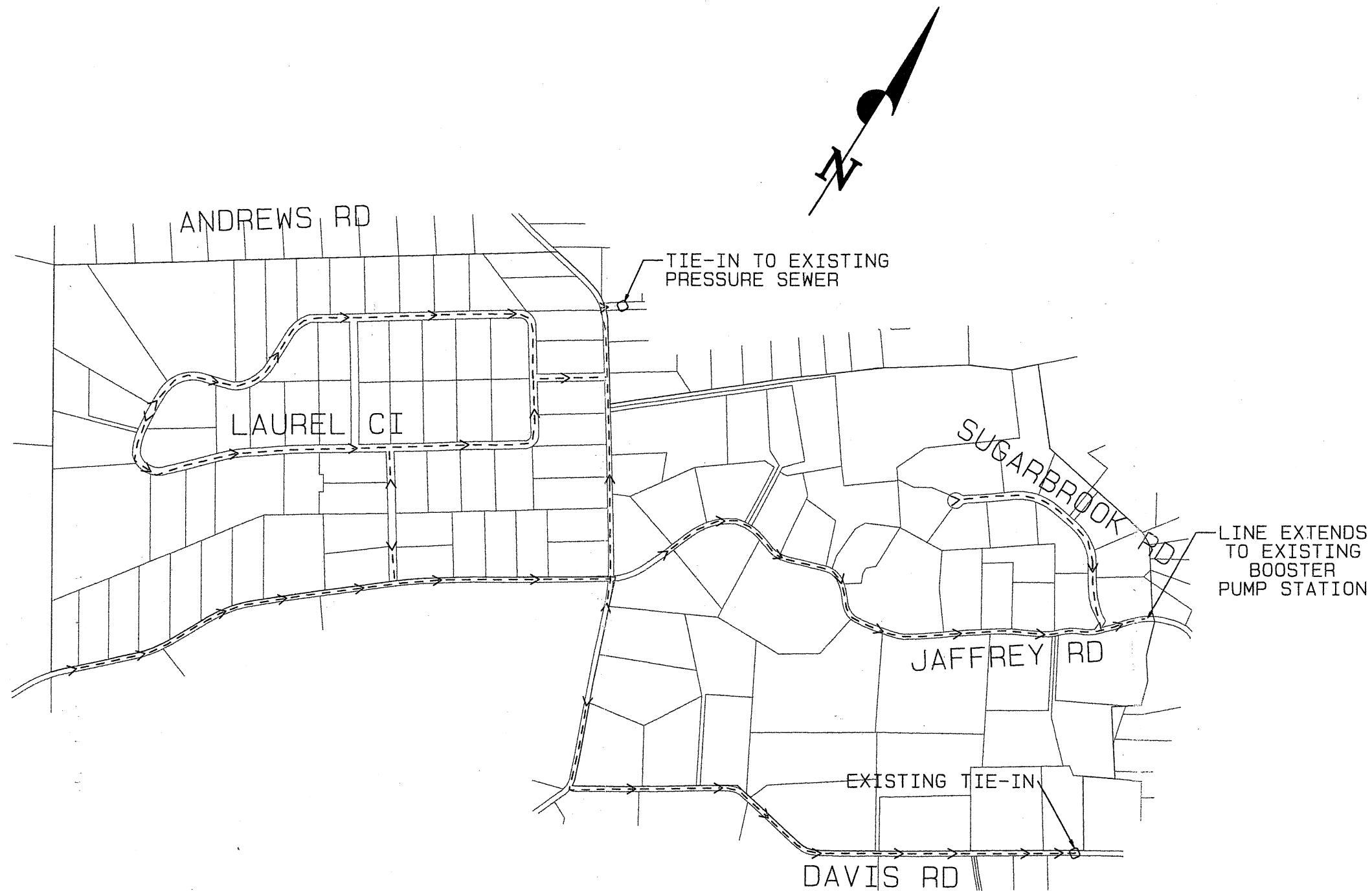
SURVEYORS

EAST CENTRAL PHASE II STUDY AREA

ACT 537 - EXHIBIT 15a

WILLISTOWN TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA



STUDY AREA "B"

YERKES ASSOCIATES, INC.

1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254

CONSULTING ENGINEERS

LANDSCAPE ARCHITECTS

SITE PLANNERS

SURVEYORS

**EAST CENTRAL PHASE II
PROPOSED CONCEPT OF
SEWER INSTALLATION**

ACT 537 - EXHIBIT 15b



Environmental Protection by
Caring Professionals

Valley Forge Sewer Authority

333 Pawling Road
Phoenixville, Pennsylvania 19460
610-935-1553

MUNICIPALITIES

Charlestown
Easttown
East Pikeland
East Whiteland
Malvern
Schuylkill
Tredyffrin
Willistown

MEMO TO: Easttown, East Whiteland, Malvern, Tredyffrin and
Willistown Townships

FROM: Joseph Bateman

SUBJECT: Revised Rerate Capacity Table

DATE: May 16, 2000

Ladies and Gentlemen:

Earlier this month you received an estimate of E.D.U.'s that would become available at the time that rerate permits are issued. As this series of tables was inaccurate, please discard them.

Enclosed is the correct version. Please accept my apologies for the error.

JSB/rs

EXHIBIT 15c

WILLISTOWN TOWNSHIP
EAST CENTRAL II
PRESSURE SEWER SYSTEM - ESTIMATED PROJECT COSTS
ALTERNATIVE 2

ITEM NO.	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED QUANTITY	TOTAL AMOUNT
ENTIRE AREA					
1 L.F.	2-4 inch pressure sewer		\$ 48.00	22800	\$ 1,094,400
2 EACH	1.25 inch pressure sewer laterals		\$ 125.00	116	\$ 14,500
3 LUMP SUM	Upgrade Existing Booster Pump Station		\$ 25,000.00	1	\$ 25,000
4 LUMP SUM	Booster Pumping Station		\$ 50,000.00	2	\$ 100,000
		sub total			\$ 1,233,900
		Total			\$ 1,233,900
		30% - Legal and Engineering/Permits			\$ 370,170
		Total Estimated Project Costs			\$ 1,604,070
		Number of EDUs			\$ 116
		Cost per EDU			\$ 13,828.19

Prepared by:
Yerkes Associates, Inc.

WILLISTOWN TOWNSHIP
EAST CENTRAL II
PRESSURE SEWER SYSTEM - ESTIMATED PROJECT COSTS
ALTERNATIVE 3

ITEM NO.	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED QUANTITY	TOTAL AMOUNT
PHASE I - LAUREL CIRCLE/HILDALE DRIVE					
1 L.F.	2-4 inch pressure sewer		\$ 48.00	12800	\$ 614,400
2 EACH	1.25 inch pressure sewer laterals		\$ 125.00	70	\$ 8,750
3 LUMP SUM	Booster Pumping Station		\$ 50,000.00	1	\$ 50,000
		sub total			\$ 673,150
		Total			\$ 673,150
	30% - Legal and Engineering/Permits				\$ 201,945
	Total Estimated Project Costs				\$ 875,095
	Number of EDUs				\$ 70
	Cost per EDU				\$ 12,501.36
PHASE II- JAFFREY RD/SUGARBROOK LN					
1 L.F.	2-4 inch pressure sewer		\$ 48.00	5800	\$ 278,400
2 EACH	1.25 inch pressure sewer laterals		\$ 125.00	35	\$ 4,375
3 LUMP SUM	Upgrade Existing Booster Pump Station		\$ 25,000.00	1	\$ 25,000
		sub total			\$ 307,775
		Total			\$ 307,775
	30% - Legal and Engineering/Permits				\$ 92,333
	Total Estimated Project Costs				\$ 400,108
	Number of EDUs				\$ 35
	Cost per EDU				\$ 11,431.64

Prepared by:
Yerkes Associates, Inc.

EXHIBIT 16b

ESTIMATED PROJECT COSTS GRAVITY SEWER ALTERNATIVE 4

Estimated Proj Costs - E CENTRAL GRAVITY-TA
Printed 1/4/2002
EXHIBIT 16c

**WILLISTOWN TOWNSHIP
EAST CENTRAL II SEWER PROJECT
IMPLEMENTATION SCHEDULE**

Months from Township submittal of Act 537 Special Study	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DEP approval of Act 537 Plan																								
Prepare Part II Permit																								
Developer's Engineer Completes Design																								
Pa DEP Review and Approve Permits																								
Township Bid Project																								
Township Open Bids																								
Construction																								
Township sends "Notices to Connect"																								

1 WILLISTOWN TOWNSHIP

2 ORDINANCE NO. _____ OF 2001

3
4 AN ORDINANCE ESTABLISHING REGULATIONS FOR THE INSPECTION AND
5 MAINTENANCE OF ONSITE SEWAGE DISPOSAL SYSTEMS, AND REQUIRING
6 REGISTRATION OF ONSITE SEWAGE SERVICE BUSINESSES.
7

8 Pursuant statutory authority granted the municipality in the Pennsylvania Sewage
9 Facilities Act, 35 P.S. 750. 1, et seq., ("the Act"), as implemented by and through the
10 regulations issued by the Pennsylvania Department of Environmental Protection, Title
11 25, Chapters 71, 72 and 73, to take actions necessary to assure continued compliance
12 of sewage facilities with the Act, the Clean Streams Law and regulations promulgated
13 thereunder, the Supervisors of **WILLISTOWN TOWNSHIP, Chester County,**
14 **Pennsylvania** do hereby ordain as follows:
15

16 This Ordinance shall be known as and may be referred to as the Municipality Sewage
17 System Management Ordinance.
18

19 **SECTION 1. Purpose** - The purposes of this Ordinance include:
20

- 21 A. The regulation of the routine inspection and timely on-going maintenance of
22 Onsite systems within the Municipality;
23 B. The establishment of a continuing education program on the proper use,
24 operation and maintenance of all Onsite systems within the Municipality; and,

25 C. The registration of businesses that install, repair and service Onsite systems
26 including removal and disposal of septage.

27

28 **SECTION II. Terms and Definitions**

29

30 The following words and terms when used in the Ordinance shall have the following
31 meanings:

32

33 **Absorption Area** – The component of the Onsite system that disperses partially
34 treated sewage on to the surface or into the subsurface of the ground for recycling and
35 final treatment of wastewater.

36 **Absorption Area Easement** - a portion of a lot, tract, or parcel that encompasses a
37 Primary and Replacement Area serving another lot, such areas shall be delineated
38 and preserved. The Primary and Replacement Areas need not be contiguous.

39 **Act** - The Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. (1965)
40 1535, No. 537, as amended, 35 P.S. Section 750.1 et. seq.

41 **Authorized Agent** - A Certified Sewage Enforcement Officer (SEO), professional
42 engineer or sanitarian, plumbing inspector, soils scientist, water quality coordinator, or
43 any other person who is designated to carry out the provisions of this Ordinance as the
44 agent of the Board.

45 **Board** – The Supervisors of Willistown Township.

46 **Community Sewage System** - A system, whether publicly or privately owned, for the
47 collection of sewage or industrial wastes of a liquid nature from two or more lots, and
48 for the treatment or disposal of the sewage or industrial waste on one or more of the
49 lots or at any other site.

50 **DEP/the Department** - The Department of Environmental Protection for the
51 Commonwealth of Pennsylvania

52 **Developer** - Any person, partnership or corporation which erects or contracts to erect
53 a building on property owned by it, with the intent to sell the building to some other
54 party upon its full or partial completion, or upon the conveyance of property on which
55 the building is to be built.

56 **Drip** - A drip distribution system of effluent dispersal, also know as drip irrigation.

57 **Equivalent Dwelling Unit (EDU)** - A measure use for the purpose of determining the
58 number of lots in a subdivision or land development, that part of a multiple-family
59 dwelling, commercial, industrial, or institutional establishment with sewage flows equal
60 to four hundred (400) gallons per day.

61 **Individual Onsite sewage system** - An individual sewage system that uses a system
62 of piping, tanks, or other facilities for collecting, treating and disposing of sewage into a
63 soil absorption area or retaining tank.

64 **Individual sewerage system** - An individual sewage system that uses a method of
65 sewage collection, conveyance, treatment, and disposal other than renovation in a soil
66 absorption area, or retention in a retaining tank.

67 **IRSIS** - An individual residential spray irrigation system.

68 **Local Agency** - The Chester County Health Department

69 **Malfunction** - The condition that occurs when an Onsite system causes pollution to
70 the ground or surface waters, contamination of private or public drinking water
71 supplies, nuisance problems or hazard to public health.

72 **NOWRA** - The National Onsite Wastewater Recycling Association

73 **Owner** - Any person, corporation, partnership, etc. holding deed, or title to lands within
74 the Municipality.

75 **Onsite System** - An individual or a community sewage system that recycles treated
76 wastewater into the groundwater at the site of generation.

77 **PSMA** – The Pennsylvania Septage Management Association

78 **Planning Module for Land Development** - A revision to, or exception to the revision
79 of, the Official Plan, submitted in accordance with DEP regulations, and in connection
80 with the request for approval of a subdivision or land development plan.

81 **Primary Area** - An area on a lot, tract or parcel of land that has been tested by the
82 SEO and found suitable, based upon the then current DEP site requirements, for the
83 installation of an Onsite sewage disposal system. Such areas shall be preserved and
84 protected from alteration for installation of the initial Onsite sewage disposal system for
85 sewage generated on that lot, tract, or parcel. The primary area includes all minimum
86 horizontal isolation distances as provided in Department regulations. (Also see
87 Replacement Area)

88 **Pumper/Hauler Business** - Any sole proprietor, company, partnership or corporation
89 which engages in cleaning any or all components of a community or individual Onsite
90 system and evacuates and transports the septage cleaned there from, whether for a
91 fee or free of charge. **Pumper/Hauler Truck Operator** - A natural person who engages
92 in cleaning any or all components of a community or individual Onsite sewage system
93 and evacuates and transports the septage cleaned there from, whether for a fee or
94 free of charge.

95 **Pumper's Report/Receipt** - A form, provided by the Municipality, which shall be used
96 by all Pumper/Hauler Truck Operators to report every pumping of an Onsite system in
97 the Municipality.

98 **Regulations** - the Pennsylvania Code, Title 25, Chapters 71, 72, and 73

99 **Repair** - Work done to modify, alter, rehabilitate, or enlarge an existing Onsite system.

100 **Replacement Area** - An area on a lot, tract or parcel of land, separate from the
101 Primary Area for the installation of a replacement Onsite system. Such areas shall
102 meet the same requirement as Primary areas.

103 **Retaining Tank** - A watertight receptacle that receives and retains sewage and is
104 designed and constructed to facilitate ultimate disposal of the sewage at another site.
105 The term includes, but is not limited to, the following:

106 **Chemical toilet** - A permanent or portable non-flushing toilet using chemical
107 treatment in the retaining tank for odor control.

108 **Holding tank**- A tank, whether permanent or temporary, to which sewage is
109 conveyed by a water-carrying system.

110 **Privy**- A tank designed to receive sewage where water under pressure is not
111 available.

112 **Incinerating toilet** - A device capable of reducing waste materials to ashes.

113 **Composting toilet** - A device for holding and processing human and organic
114 kitchen waste, employing the process of biological degradation through the
115 action of microorganisms to produce a stable, humus-like material.

116 **Recycling toilet** - A device in which the flushing medium is restored to a
117 condition suitable for reuse in flushing.

118 **Septage** - The residual scum, sludge, and other materials pumped from septic or
119 aerobic treatment tanks and the systems they serve.

120 **Sewage** - Any substance that contains any waste products, or excrement, or other
121 discharge from the bodies of human beings or animals; a substance harmful to the
122 public health, animal or aquatic life, or the use of water for domestic water supply or
123 for recreation, or a substance which constitutes pollution to the waters of the
124 Commonwealth under the Clean Streams Law (35 P.S. §691.1 - 691.1001).

125 **Sewage Enforcement Officer (SEO)** – An official of the local agency who reviews
126 permit applications and sewage facility planning modules and issues permits as
127 authorized under the Act and conducts the investigations and inspections that are
128 necessary to implement the Act.

129 **Sewage Facilities** - Any method of sewage collection, conveyance, treatment, and
130 disposal that will prevent the discharge of untreated or inadequately treated sewage
131 into the waters of this Commonwealth, or otherwise provide for the safe treatment and
132 disposal of sewage or other waste.

133 **Single and Separate Ownership** - The ownership of a lot by one or more persons,
134 which ownership is separate and distinct from that of any abutting or adjoining lot.

135 **Soil Absorption System** - An Onsite system that uses the renovative capacity of the
136 soil for final treatment of the effluent. All SEO permitted systems, except retention tank
137 systems, are soil absorption systems.

138 **Subdivision** - The division or re-division of a lot, tract or other parcel of land into two
139 or more lots, tracts, parcels, or other divisions of land, includes changes in existing lot
140 lines. The enumerating of lots shall include as a lot that portion of the original tract or
141 tracts remaining after other lots have been subdivided there from.

142 **Treatment Tank** - A watertight tank designed to retain sewage long enough for
143 satisfactory bacterial decomposition of the solids to take place. The term includes the
144 following:

145 **Septic tank** - A treatment tank that provides for the separation and storage of the
146 solid portions of sewage prior to discharge of the liquid portion to an absorption
147 area, while providing for anaerobic decomposition of sewage solids.

Aerobic sewage treatment tank - (also known as an aerobic treatment unit

(ATU) - A mechanically aerated tank that provides aerobic biochemical treatment and solids separation of sewage prior to discharge to an absorption area.

SECTION III - Coordination with Building Permits and Occupancy Permits

- A. Building permits shall not be issued for any new building, or improvement to real property to be served by an Onsite system, without a receiving a permit for the installation Onsite system from the SEO. A copy of the Onsite system permit shall be provided at the time of building permit application.
- B. Building permits shall not be issued for any building addition, or improvement to a real property currently served with an Onsite system, without a prior inspection of the Onsite system under this program. If the inspection revealed a deficiency with the Onsite system, the building permit may be issued after the deficiency has been corrected. If the inspection indicated a satisfactory system but as a result of the building addition or improvement that the existing Onsite system would be undersized a new Onsite system permit for an expanded system would be required to be provided at the building permit application.
- C. Building permit applications shall contain site plan with all information related to any Onsite system. All system components including absorption areas and replacement areas, if required, should be located on the site plan. An "As-built" record drawing shall be provided prior to issuance of any occupancy permit. System components shall be drawn to scale and provide two measured distances between each component and a property or building corner.

SECTION IV. - Replacement Areas

173

174 A. A replacement soil absorption area shall be provided for all proposed lots less
175 than two acres in net area, except where an IRSIS or a Drip system is
176 proposed.

177 B. Allowance of open land for the replacement area, without performance of
178 appropriate soil testing to verify suitability of the land for a replacement area,
179 shall not constitute compliance with the requirements of this Section.

180 C. The location of the primary and replacement areas shall be delineated on the
181 plot plans, and maps or diagrams submitted as part of the permit application
182 and subdivision or land development plan.

183 D. Where an absorption area is located on a lot other than the proposed to be
184 served by the absorption area an easement shall be required. The description,
185 including meets and bounds, of every absorption area easement shall be
186 recorded as part of the deed for each lot created as part of a subdivision or
187 land development, and shall contain language reflecting the following:

- 188 1. No improvements, whether permanent or temporary, shall be
189 constructed upon or within the absorption area easement.
- 190 2. No permanent or temporary alterations, grading, excavation, stockpiling
191 of any soil or any other material shall take place on or in the absorption
192 area easement.
- 193 3. During any construction or other activities, the absorption area easement
194 shall be so marked to prevent equipment with greater wheel loadings
195 than a common garden tractor/riding mower from traveling over or
196 operating upon the surface of the absorption area easement.

197 4. The final cover or improvement to every absorption area easement shall
198 be limited to shallow-rooted plant matter.

199 5. The every corner of the absorption area easement shall have a 36-inch
200 deep concrete survey monument buried flush with the ground surface.
201 The center of the every monument shall have a scribed bronze disk to
202 identify the easement.

203 F. A landowner wishing to alter the use of the absorption area easement must
204 first document, through a site evaluation by the SEO, that an additional area
205 suitable for the installation of an Onsite system exists, and upon such a finding
206 shall:

207 1. Prepare and submit to the SEO for approval a Declaration of Easement
208 which shall:

209 a. Meet the identification, non-use and preservation requirements of
210 this Section,

211 b. Describe, by meets and bounds, the easement area to be
212 abandoned.

213 2. Within 15 days of the approval by the Municipality, record the Declaration
214 of Easement at the County Recorder of Deeds Office.

215 3. File a copy of the recorded easement with the Municipality.
216

217 **SECTION V. –The Operation and Maintenance of Onsite Systems**

218 A. Owner's maintenance responsibilities.

219 a. The owner of a property upon which is served by an Onsite system is shall
220 at all times operate and maintain the Onsite system in such condition as

will permit it to function in the manner in which it was designed and to prevent the unlawful discharge of sewage.

- b. The owner of a property upon which is served by an Onsite system shall maintain the area around such system so as to provide convenient access for inspection, maintenance, and pumping, and divert surface water and downspouts away from the absorption area and system components.
- c. An owner of property who discloses to the SEO the presence of a potential malfunction upon of their Onsite system shall not be penalized should actual malfunction be disclosed, provided the malfunction is rectified in such a time and manner to be in accordance with local agency policy.
- d. In the event any adjacent landowner detects conditions the may indicate or could reasonably be interpreted to indicate a malfunction, the landowner shall preferably first contact the owner of the property with suspected malfunction so the owner of the property may contact the SEO. However, if the owner of the property fails to contact the SEO, the adjacent landowner should contact the municipality. The municipality will then attempt to contact owner of the property.

B. Owner's Pumping Requirements –

- a. The Owner of the property is responsible to arrange and pay for the pumping of tank on their property.
- b. Treatment Tanks - shall be pumped out:
 - i. Every three years or,

244 ii. Whenever an inspection reveals that the tank is filled with solids in
245 excess 1/3 of the liquid depth or with scum in excess of 1/3 of the liquid
246 depth of the tank or,

247 iii. If the component's manufacturer requires a more frequent service
248 interval.

249 c. Dosing and lift pump tanks – shall be checked during any inspection of the
250 system and pumped out as necessary.

251 d. Retaining (holding) tanks - shall be pumped out at such intervals as will
252 prevent overflow, leakage, backup, other malfunction, or a public health
253 hazard or nuisance, but no less frequently than one times per year.

254
255 C. Pumper/Haulers responsibilities –

256 a. All Pumper/Haulers who service Onsite systems in this municipality shall
257 be certified by either the PSMA or of the NOWRA and shall be registered
258 with the municipality.

259 b. Pumping shall be preformed in accordance for the standards of either the
260 PSMA or NOWRA.

261 c. Upon completion of any pumping, the Pumper/Hauler shall:

262 i. Complete a Municipal Pumper Report;

263 ii. Deliver the original Pumper Report to the landowner;

264 iii. Deliver a copy of the Pumper Report to the Municipality by the 10th
265 business day of the month following the month of inspection and or
266 pumping.

269 **Section VI – Inspection of Onsite Systems**

- 270 A. The municipality may retain the services of a qualified Onsite Wastewater
271 System Inspector to administer the provisions of this ordinance.
- 272 B. Persons undertaking inspections of an Onsite system shall be certified by
273 either PSMA or NOWRA.
- 274 C. Initial inspection – The first time a system is inspected under this program the
275 inspector shall obtain the following minimum information on forms provided by
276 the municipality:
- 277 a. Date of inspection,
- 278 b. Property address where system is located
- 279 c. Name of current occupant and number of users on the system,
- 280 d. Name and address of system owner, if different from owner's,
- 281 e. Description and diagram of the location with distances relative to two
282 fixed landmarks of the:
- 283 i. Building sewer with cleanouts,
- 284 ii. Treatment tank(s), Risers, Inspection ports,
- 285 iii. Access hatches, pump tanks, filters, D-box, absorption areas, etc.,
- 286 iv. Presence and condition of baffles in ALL tanks and ALL
287 compartments,
- 288 v. Permit number and date existing system was installed (if known,
289 month/year),
- 290 vi. Last date of pump-out (if known, month/year)
- 291 vii. List of other maintenance performed
- 292 viii. Indications of system malfunction observed,

- 293 ix. Estimated amount (by percentage of depth) of septage, sludge
294 and scum in each treatment tank,
- 295 f. List of recommendations for system rehabilitation,
296 g. Statement of general system condition,
297 h. Recommendation for follow-up inspection,
298 i. List of water conservation devices in use,
299 j. Inspector's signature.
- 300 D. Follow-up Inspections - Follow-up inspections will be performed on the
301 following schedule unless recommendations for the prior indicates a more
302 frequent inspection:
- 303 a. Single family dwellings with gravity flow thru systems every two years,
304 b. Single family dwellings with a pressure distribution system or lift pump
305 every year,
306 c. Single family dwellings with a ATU, every year,
307 d. Single family dwellings with a Bonded or Experimental sewage system,
308 every year,
309 e. Community Systems serving single family dwelling with gravity flow thru
310 systems, every year,
311 f. All other Onsite systems, quarterly.
- 312 E. Owners of properties with Onsite systems shall receive advance notice of
313 inspections by the Authorized Agent of the Municipality at least thirty (30) days
314 prior twenty-four hours prior to the inspection. Any owner of property who does
315 not wish the Authorized Agent to enter their property shall notify the Agent at
316 least seventy-two (72) hours prior to the scheduled inspection in accordance
317 with the instructions on the inspection notice.

F. In the event that access to inspect any property is denied, the Agent shall not enter the property and make observations only from a public street or an adjacent property of whom did not deny access.

G. Observations of a potentially malfunctioning or questionable operating Onsite system made from a public street or adjacent property made by the Authorized Agent of the Municipality shall be brought to the attention of the Local Agency.

SECTION VII – Continuing Education

A. The municipality shall annually mail to each owner of a property with an Onsite system within the municipality information on the proper operation and maintenance of Onsite systems.

B. The municipality shall publish and distribute to each owner of a property with an Onsite system a listing of all Pumper/ Hauler Businesses registered with the municipality.

C. The municipality shall publish and distribute to each owner of a property with an Onsite system a listing of all Onsite system installer Businesses registered with the municipality.

SECTION VIII. - Business Registrations

A. Pumper/Haulers - At least thirty (30) days before offering pumping services to property owners with Onsite systems within this municipality the business shall:

1. Register with the Municipality and comply with all reporting requirements established herein;

2. Identify all employees/owners and vehicles that will provide these services in the Municipality;
3. Operate in a manner consistent with the provisions of the Pennsylvania Solid Waste Management Act (Act 97 of 1980, 35 P.S. §6018.101- 6018.1003); and
4. Provide documentation that all septage pumped from properties in this Municipality will be delivered to a DEP approved site or facility.
5. Businesses that register before November 30th of a given year will be listed in the municipality's annual listing of Registered Pumper /haulers for the next year.
6. All registrations expire December 31st.

B. Onsite system installers - At least thirty (30) days before offering any system installation, repair or service to any property owners with Onsite systems within this municipality the business shall:

1. Register with the Municipality and comply with all reporting requirements established herein;
2. Identify all employees/owners and vehicles that will provide these services in the Municipality;
3. Provide a record of all installation, repair or service work preformed on Onsite systems in this Municipality;
4. Businesses that register before November 30th of a given year will be listed in the municipality's annual listing of Registered Pumper /haulers for the next year.
5. All registrations expire December 31st.

368

369 **SECTION IX - Fees**

370 The Board may, by resolution, may establish a fee schedule and collect fees to cover
371 the Municipality's actual costs of administering this Ordinance.

372

373 **SECTION X - Maintenance Districts Created**

374 The Board may, by resolution, may establish districts and an implementation schedule
375 to phase in this Ordinance within a five (5) year period.

376

377 **SECTION XI. - Violations - Penalties – Suspensions**

378

379 A. Failure to comply with any of the requirements of this ordinance shall be a
380 violation enforceable by a summary proceeding before a district justice having
381 jurisdiction.

382 B. Upon conviction, the person or entity shall be subject to a fine of not less than
383 \$300, nor more than \$1,000, plus the cost of prosecution.

384 C. Each day the violation persists after notice of such violation shall be
385 considered a separate violation.

386 D. It shall be illegal to construct, alter or repair an Onsite system without first
387 obtaining a permit for the installation or repair from the SEO.

388 E. It shall be illegal for a Hauler/pumper or other Onsite system business to fail to
389 file the necessary reports in a timely manner.

390 F. Any person or entity which has been convicted on two (2) occasions for
391 violations of this Ordinance, or which fails to comply with any of the provisions
392 of this Ordinance, or which violates the conditions of its DEP permit relating to

418

Chairman

419

420

Secretary

421



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

January 30, 2002

Willistown Township
688 Sugartown Rd
Malvern, PA 19355

Attention: William Rosenberry

Subject: Act 537 Plan Update

Dear Bill,

Enclosed is a copy of the Act 537 Plan Update that was sent to DEP on January 30, 2002 for review.

If you have any questions, let me know.

Very truly yours,

Yerkes Associates, Inc.

A handwritten signature in cursive script that reads "Tricia Angoli".

Tricia Angoli



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

January 28, 2002

Chester County Planning Commission
Attn: William H. Fulton, AICP
601 Westtown Rd, Suite 270
West Chester, PA 19380-0990

Re: Act 537 Plan Update
Willistown Township

Dear Mr. Fulton,

As part of a Township's responsibility to review, adopt, and implement official plans, Willistown Township is required under PA Code Title 25 § 71.31(b) to request, review, and consider comments by the local and county planning agencies and the county health department. On behalf of the Township, we thank you for the timely comments in your letter dated October 15, 2001. We have reviewed your comments and respond to them as follows:

- A. Consistency with the County Plan – **Landscapes** – Special attention was given to making this update consistent with the County Plan by trying to provide wastewater facilities that not only protect the public health but also the natural resources within the Township.
- B. Selection of Alternatives:
 - 1. An estimate of the capital costs for constructing the system has been provided. The operation and maintenance costs will be evaluated when determining sewer user charges.
 - 2. The Township is working to protect the public health and the natural resources within the boundaries of the Township and feels that the best way to do that is to properly operate and maintain all on-lot systems located within the Township. This includes providing public sewer to the areas of the Township with the greatest need.

A. General Comments:

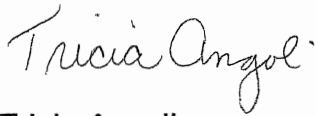
Professional services since 1874

1444 Phoenixville Pike, P. O. Box 1568, West Chester, PA 19380-0078 / Tel: 610-644-4254 / Fax: 610-640-0771

1. The Exhibit and text have been modified for consistency. All color exhibits have been redone in black and white. Color copies are expensive and it is not always possible to reproduce the colors exactly from one copy to the next.
- 2.-16. Corrections and modifications have been made to the text and exhibits based on these comments.
17. The provisions under Section 71.21(a)(5)(i) pertain mainly to new land development proposed within the Township. We are not proposing to sewer any new land developments at this time. Only existing homes are being sewered. Detailed planning for vacant parcels within the study areas will be included in planning modules for new land development in the future. At that time compliance with Section 71.21(a)(5)(i) will be done.
18. The date of the letter referenced in the text has been changed.

Very truly yours,

Yerkes Associates, Inc.



Tricia Angoli

cc: Ralph DeFazio, Chester County Health Dept
Willistown Township



Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

January 28, 2002

Chester County Health Department
Attn: Ralph DeFazio
601 Westtown Rd, Suite 288
West Chester, PA 19380-0990

Re: Act 537 Plan Update
Willistown Township

Dear Mr. DeFazio,

As part of a Township's responsibility to review, adopt, and implement official plans, Willistown Township is required under PA Code Title 25 § 71.31(b) to request, review, and consider comments by the local and county planning agencies and the county health department. On behalf of the Township, we thank you for the timely comments in your letter dated December 17, 2001. We have reviewed your comments and respond to them as follows:

The colored exhibits have been redone in black and white. Color copies are expensive and it is not always possible to reproduce the colors exactly from one copy to the next. Changes have been made in the text to reflect the changes in the exhibits.

All the administrative comments provided by the Chester County Planning Commission have been addressed.

A current copy of the Willistown Township Act 537 Plan Update, with all of the changes, will be sent to you.

Very truly yours,

Yerkes Associates, Inc.

A handwritten signature in cursive script that reads "Tricia Angoli".

Tricia Angoli

cc: William H. Fulton, Chester County Planning Commission
Willistown Township

Professional services since 1874

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Yerkes Associates, Inc.

Consulting Engineers / Landscape Architects / Surveyors

January 30, 2002

Department of Environmental Protection
Lee Park, Suite 6010
555 North Ln
Conshohocken, PA 19428

Attention: James H. W. Newbold, PE
Water Program Manager

Subject: Willistown Township, Chester County
Act 537 Plan Update

Dear Mr. Newbold,

Enclosed please find three copies of the adopted Act 537 Plan Update for Willistown Township for review.

Please contact me if you have any questions.

Very truly yours,

Yerkes Associates, Inc.

Tricia Angoli

Tricia Angoli

cc: William Rosenberry

Professional services since 1874

1444 Phoenixville Pike, P. O. Box 1568, West Chester, PA 19380-0078 / Tel: 610-644-4254 / Fax: 610-640-0771